

# 2010 UPDATE: MOBILITY ASSESSMENT AND BOTTLENECK CHANGES

Prepared for  
The Georgia Department of Transportation  
by Skycomp, Inc. (Columbia, Maryland)

Publication Date: January 2012

The contents in this publication reflect the views of the Author(s), who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Georgia Department of Transportation or the Federal Highway Administration. This publication does not constitute a standard, specification or regulation.



# **2010 Update: Mobility Assessment and Bottleneck Changes**

**Savannah, Augusta, Columbus  
Macon-Warner Robins**

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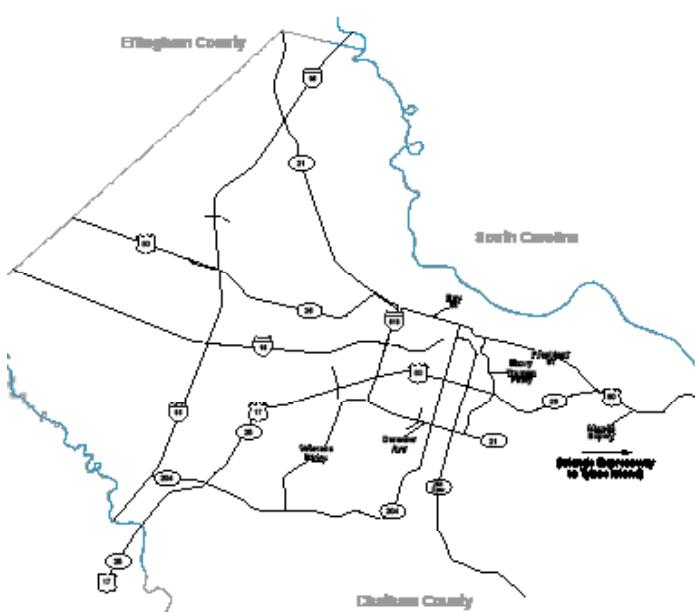
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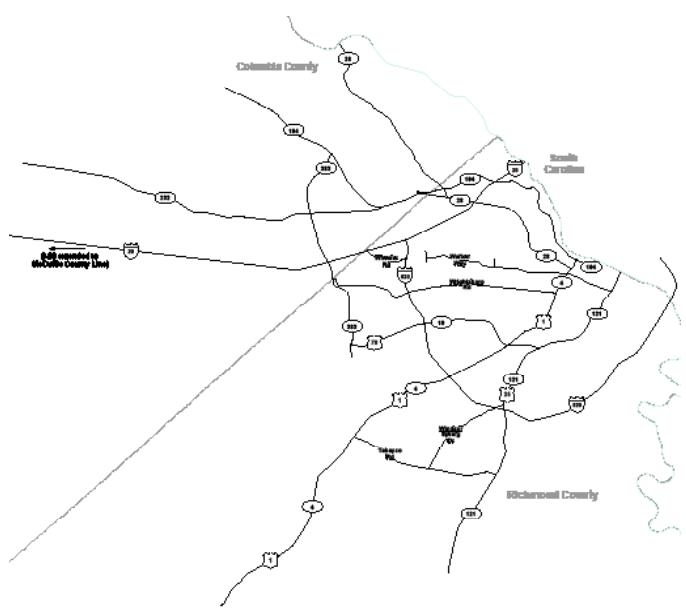
# **Surveyed Highways**

## **Georgia Cities - Fall 2010**

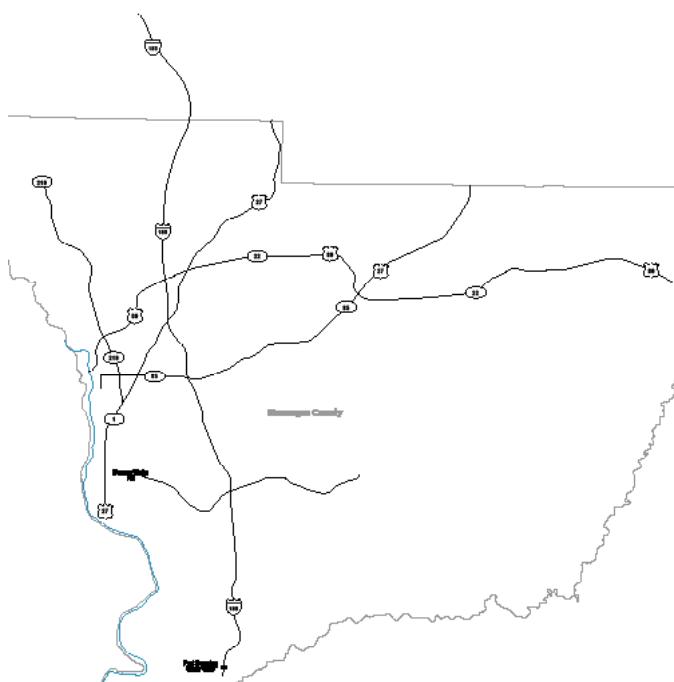
## Savannah



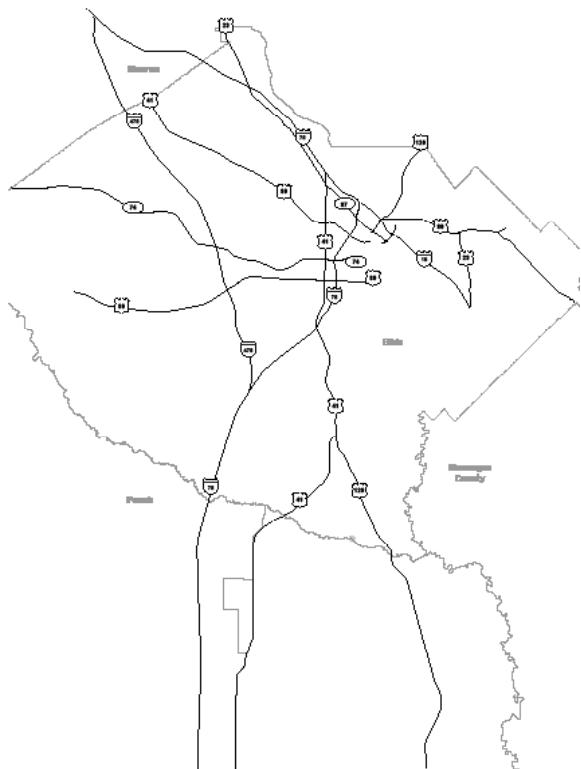
# Augusta



## Columbus



# Macon-Warner Robins



## **Introduction**

This publication summarizes the state of mobility and congestion on state highway systems in four Georgia cities: Augusta, Columbus, Macon-Warner Robins and Savannah. These data are based on surveys conducted during fall 2010 peak commute periods. This report also compares those findings to surveys conducted previously in 2002, acquired of the same highways using the same methodologies. These pages will show that congestion throughout each of the highway systems for the most part measured at levels close to those previously measured; however, improved mobility ratings were recorded for a number of highway segments directly resulting from capacity- and efficiency-enhancement projects completed since 2002. As expected, some highway segments were also identified with degraded conditions.

## **Background**

In 1998 the Georgia Department of Transportation (GDOT) initiated a program to monitor the quality of highway traffic flow across the 22-county Atlanta urbanized state highway network, through the use of time-lapse photography acquired from fast-moving aircraft. Aerial survey operations in Atlanta have been repeated every 2-4 years since 1998, with the most recent completed in 2010; over time, coverage was expanded such that 2650 centerline miles of highway was surveyed during the 2010 survey. In 2002, base line surveys were conducted in the cities of Augusta, Columbus, Macon-Warner Robins and Savannah. Aerial surveys were repeated in these cities in the fall of 2010.

Aerial photography is well suited for this purpose because it permits the comparison of mobility and congestion levels across a large highway network using one uniform set of analytical procedures. The photography also reveals insights about the underlying causes of congested bottlenecks, useful for analysis or to help decision-makers better understand technical recommendations. Information is produced through this program to support the long-range planning process, by providing a clear understanding of current conditions and trends from which realistic projections can be made. This program also provides a means to evaluate the effectiveness of specific completed projects, where those investments were intended to maintain or restore highway mobility.

During the 2002 surveys in the four Georgia cities, flights were conducted during peak morning and evening commute periods (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.), and repeated until 16 samples of each covered highway had been acquired. In 2010, survey times were expanded to 6:30 to 9:30 a.m. and 4:00 to 7:00 p.m., totaling 24 samples for each highway. After the effects of confirmed or suspected incidents were excluded, traffic flow was rated from the photography by hour, segment and direction. Performance rating database tables were then assembled; these tables indicate where highway usage was light, moderate, or heavy, and identify the location, extent, severity, and duration of congestion.

Methods have been developed to store survey data and images to facilitate fast and easy retrieval. Through the GDOT website (<http://www.dot.ga.gov/>), users can download reports from the 2002 and 2010 surveys, extract performance rating tables from the underlying database, generate customized comparison graphics, and view interactive maps that are annotated with red or orange bottleneck arrows. These arrows depict bottlenecks found on the highway network, and are hyper-linked to underlying highlight aerial photographs that open in separate windows. This collection of materials is suitable for the full range of mobility-related planning activities, from acquiring an executive-level understanding of the nature of congestion on each highway system, to providing data for specific long-range planning studies, to simply supplying an archive of photographs, graphics and rating tables for reports & slide shows about specific highway corridors.

This publication is divided into two parts. Part One: Current provides a map-based inventory of bottlenecks found on each of the highway systems, as documented during the 2010 survey flights. Part Two: Comparison presents locations where projects completed since the 2002 survey have impacted mobility; this includes descriptions of what work was done, augmented with before-and-after aerial photographs. This part also identifies locations where congestion had spread (also augmented with before-and-after photography). The comparison section concludes with a set of comparative maps, which are modified versions of the bottleneck maps referred to in Part One above; these maps introduce the use of green arrows to show where mobility had improved or cleared entirely, and the use of black and gray arrows to depict where congestion did not appreciably change.

### **Interactive Web-based Resource**

As noted above, this report is augmented with a web-based slide show that has been integrated into the official GDOT website. The maps shown in this report are also found on that website, and are linked to highlight aerial photographs that illustrate typical traffic conditions at each bottleneck. That website also contains links to the underlying traffic quality database, where users can generate reports that show how traffic performance ratings have changed since 2002. The link can be found at [www.dot.ga.gov/statistics/trafficsurvey/](http://www.dot.ga.gov/statistics/trafficsurvey/).

### **Underlying Documentation and Methodologies**

An underlying technical report that contains system-wide performance rating maps and tables, as well as descriptions of the specific methodologies used to generate them, are provided under separate cover and are available for download through the GDOT website. For 2010, the survey report is entitled:

Traffic Quality on Georgia Regional Highway Networks: Augusta, Columbus, Macon-Warner Robins , Savannah (Fall 2010)

### **Questions**

This program is directed and managed by the GDOT Office of Planning, and is executed by Skycomp, Inc. Questions about the program should be directed to Reuben Woods at [rwoods@dot.ga.gov](mailto:rwoods@dot.ga.gov), or 404-631-1806.

# **PART ONE / CURRENT:**

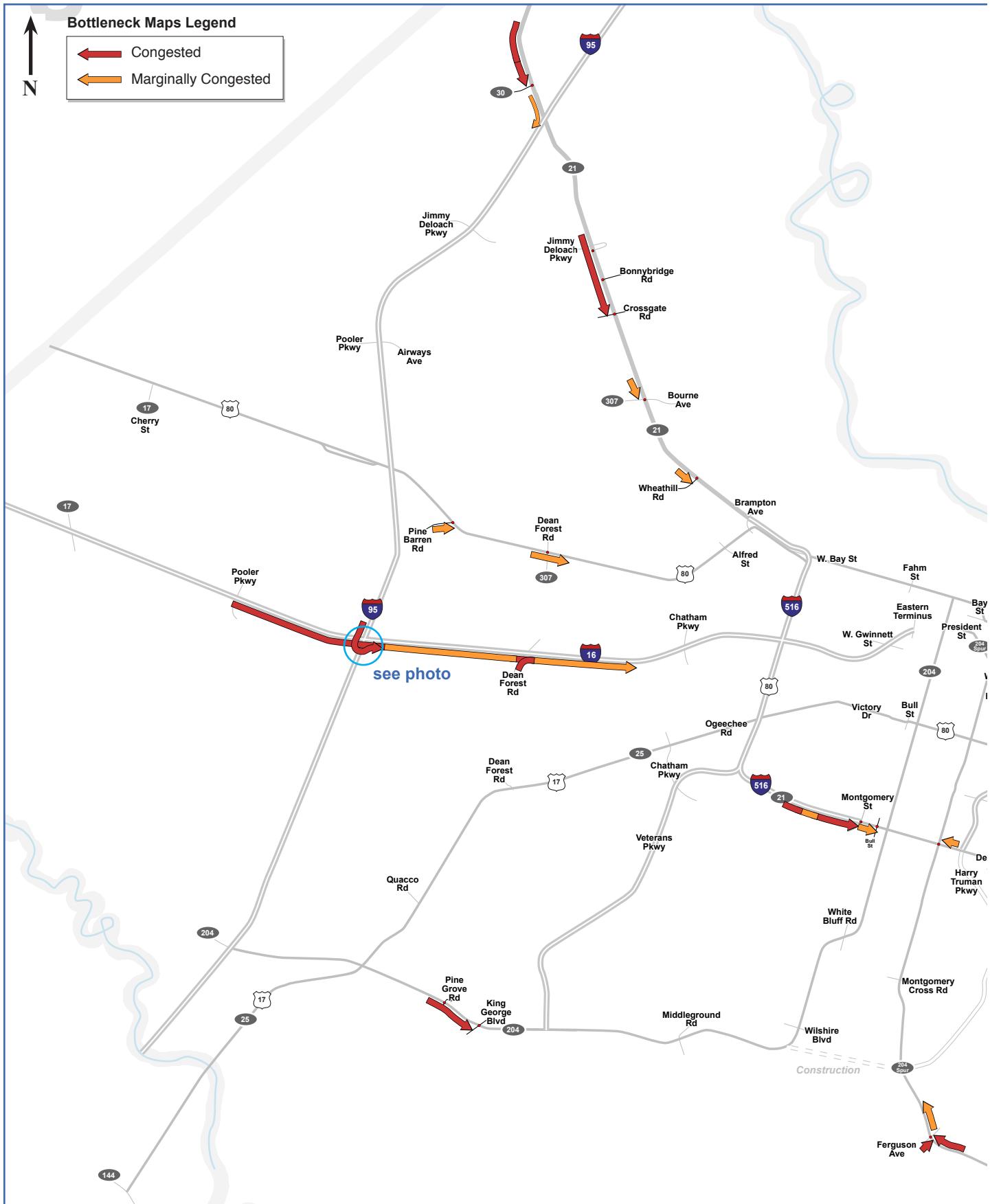
## **Regionwide Bottleneck Maps, 2010**

This section of the report presents a map-based bottleneck inventory for each of the four cities. Congestion with greater severity and higher frequency is represented by red arrows, while less-severe or intermittent congestion is represented by orange arrows. The sources of data for these bottleneck maps were the surveys conducted in the fall of 2010. More information about each bottleneck is also available through the interactive resource on the GDOT website. Representative aerial photographs have been presented with the maps; the entire archive of highlight aerial bottleneck photography is available for viewing through the website (see page two discussion under “Web-based Interactive Resource” for link).

**Bottleneck Maps Legend**

Current Traffic Conditions:	Legend for Bottleneck Maps
CONGESTED:	
MARGINALLY CONGESTED:	
NOT CONGESTED:	(No Arrow)

# **SAVANNAH BOTTLENECK MAP MORNING 2010**



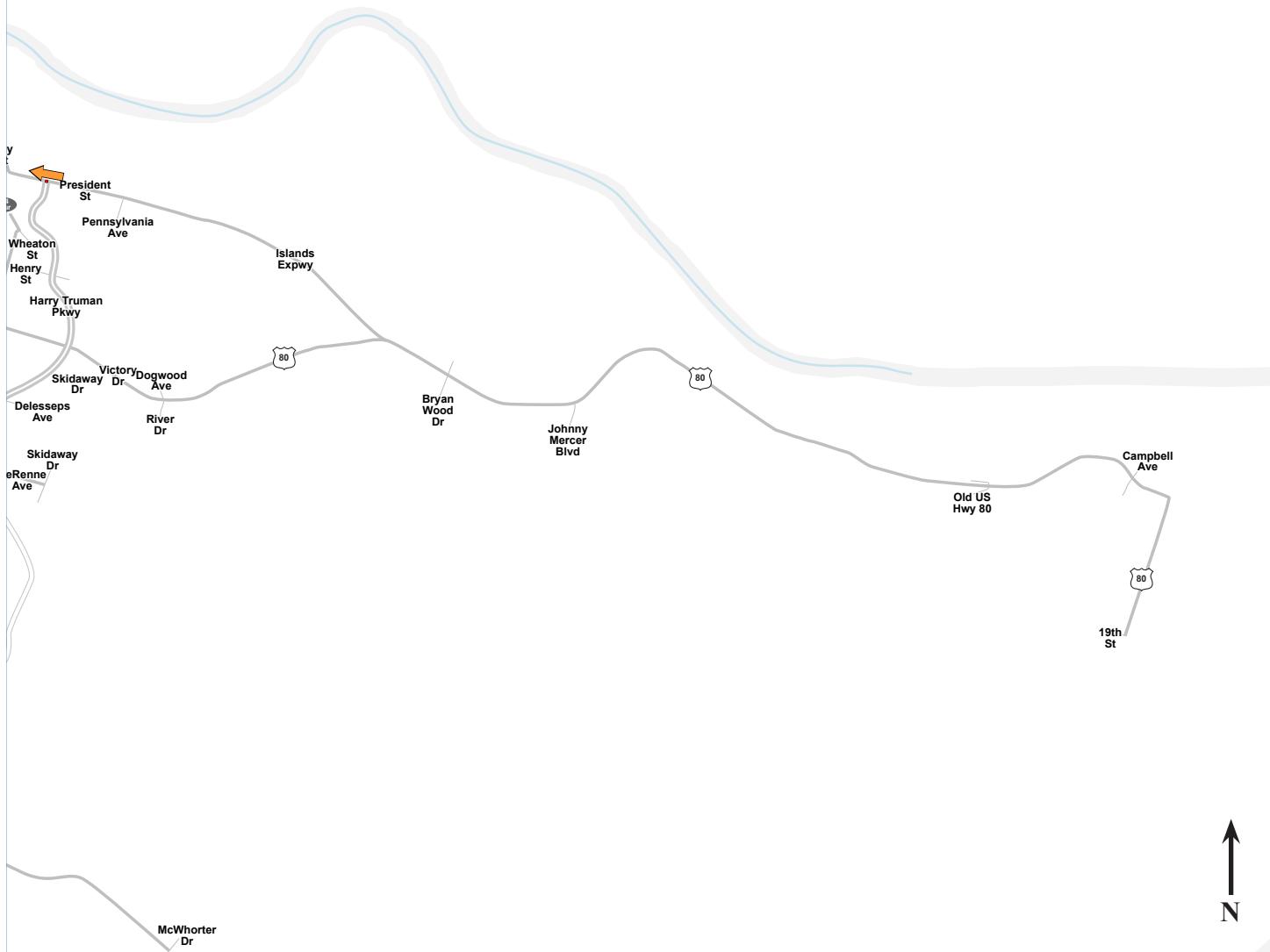
# SAVANNAH BOTTLENECK MAP MORNING 2010

## Sample Photograph

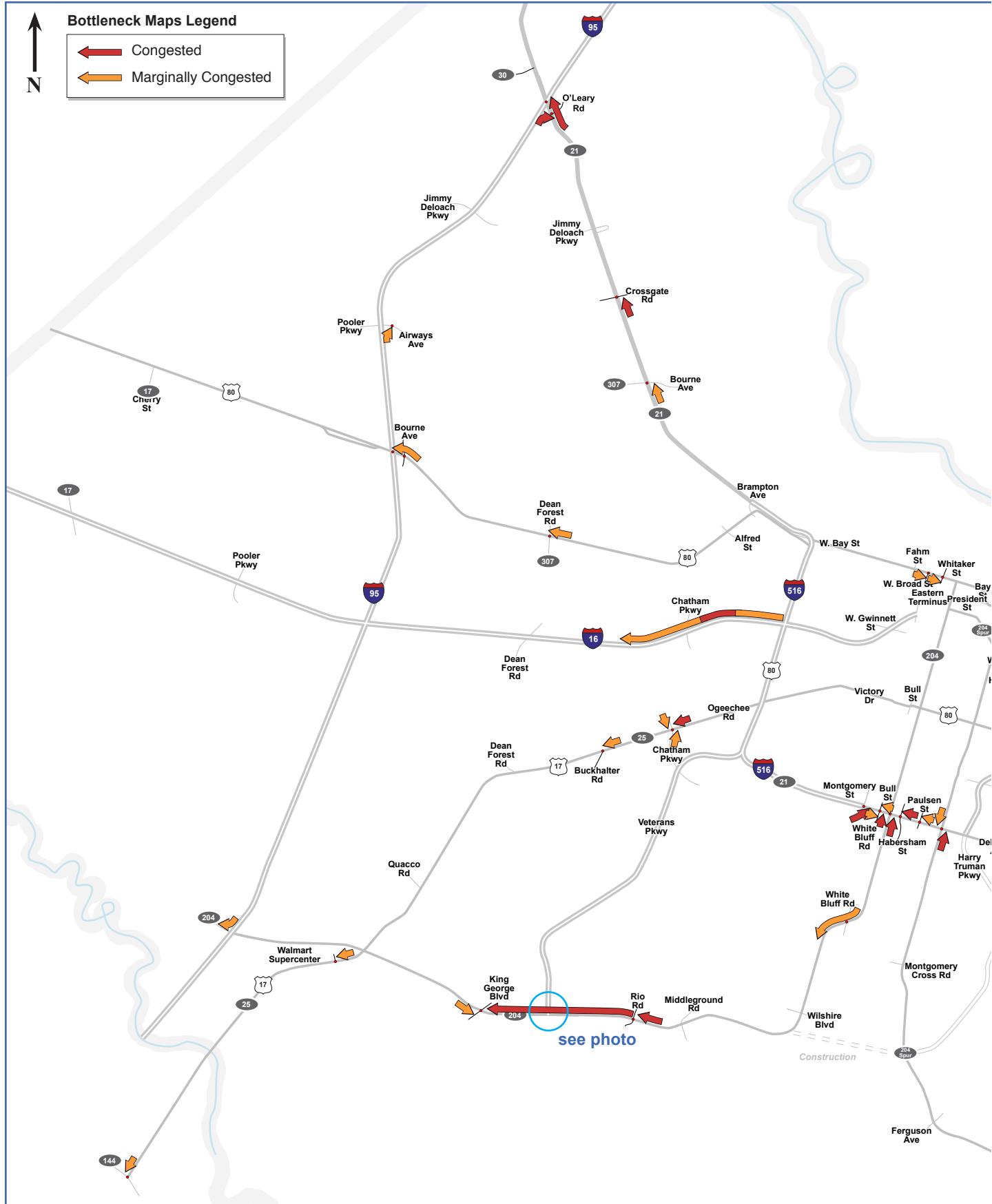


Highlight photographs of all bottlenecks depicted on this map can be found by “clicking” on the arrows in the interactive maps at [www.dot.ga.gov/statistics/trafficsurvey](http://www.dot.ga.gov/statistics/trafficsurvey).

EB I-16 @ I-95 (September 14, 2010 7:59 A.M.)

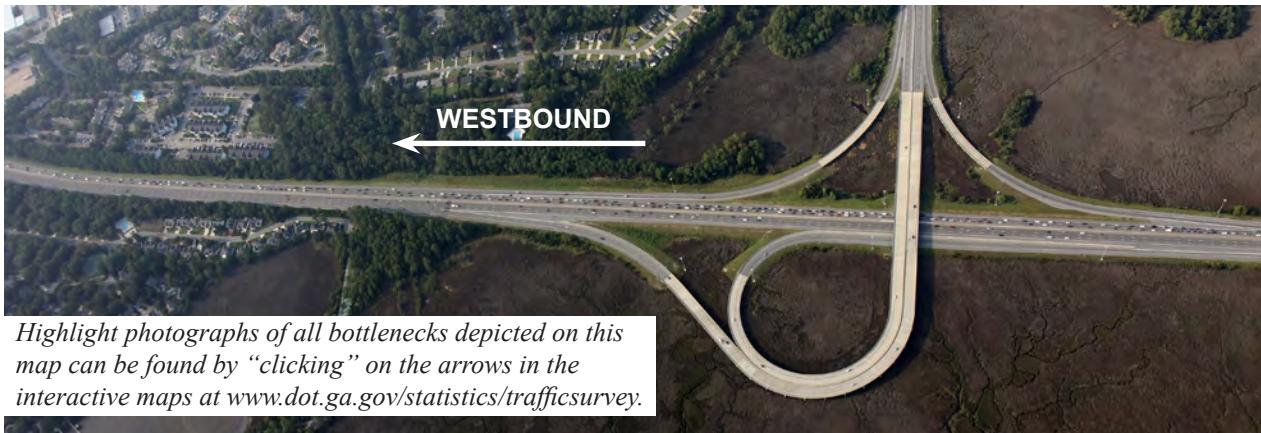


# SAVANNAH BOTTLENECK MAP EVENING 2010

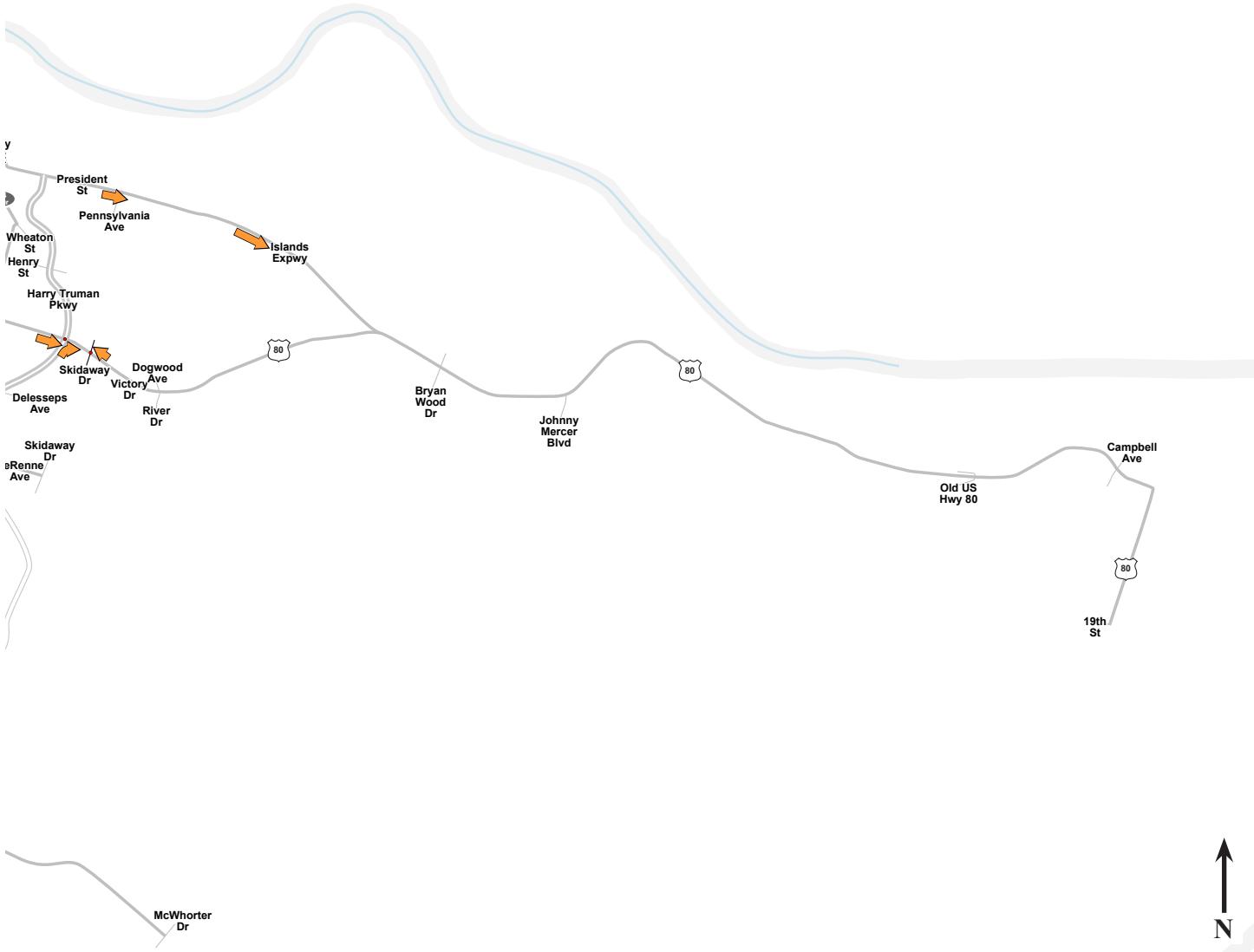


# SAVANNAH BOTTLENECK MAP EVENING 2010

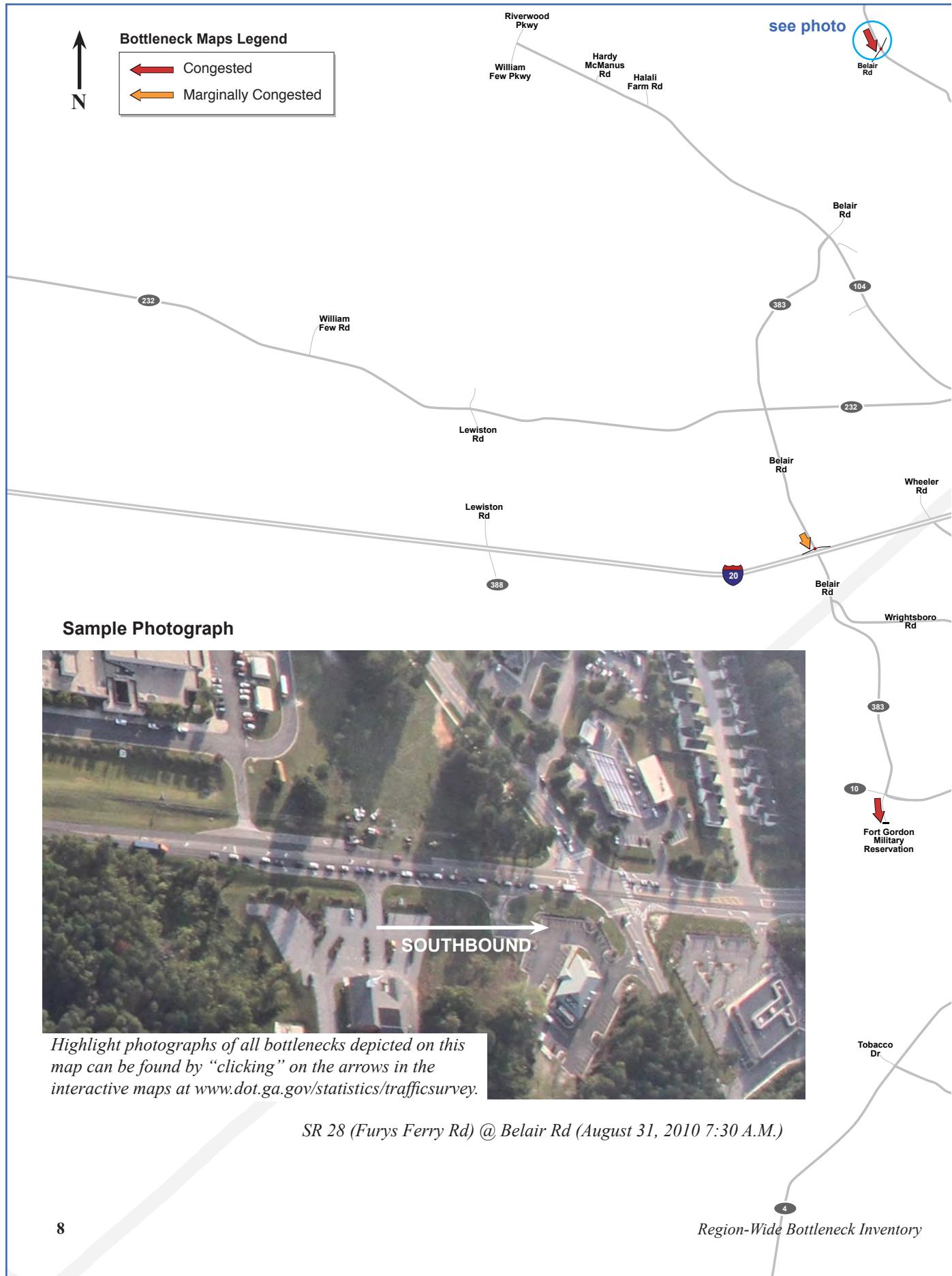
## Sample Photograph

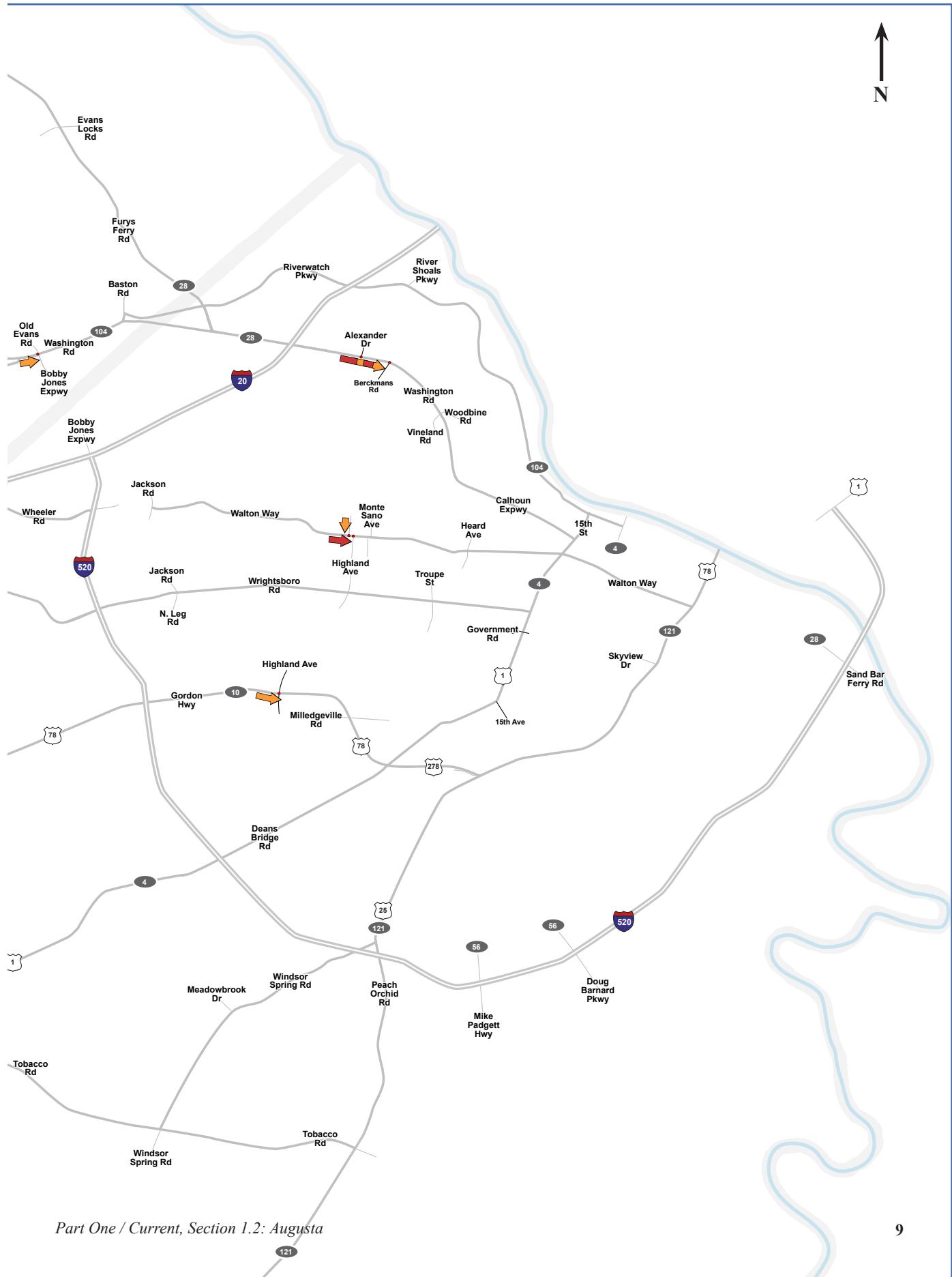


SR 204 @ Veteran's Pkwy (September 9, 2010 5:31 P.M.)



# AUGUSTA BOTTLENECK MAP MORNING 2010



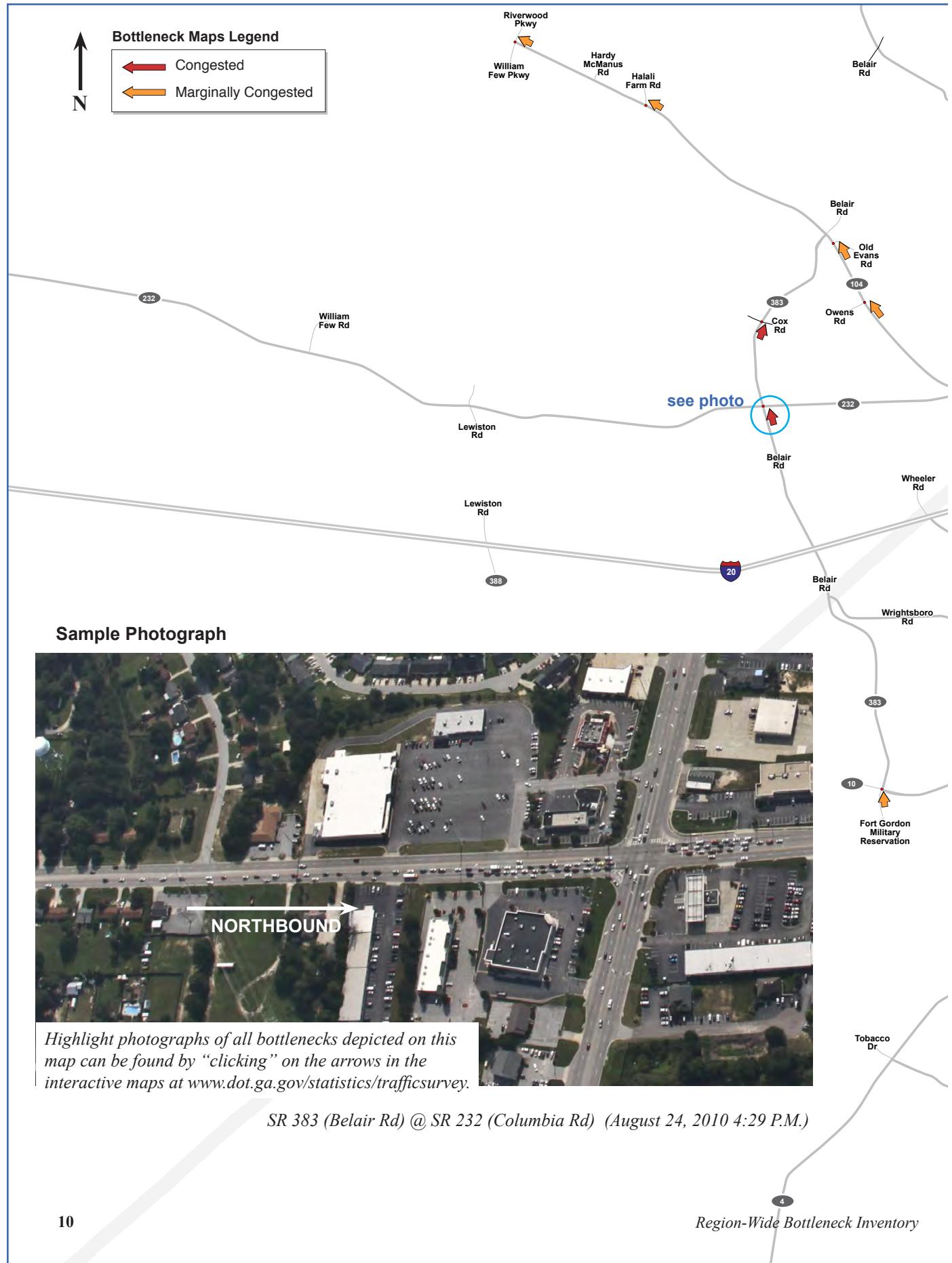


# AUGUSTA BOTTLENECK MAP EVENING 2010

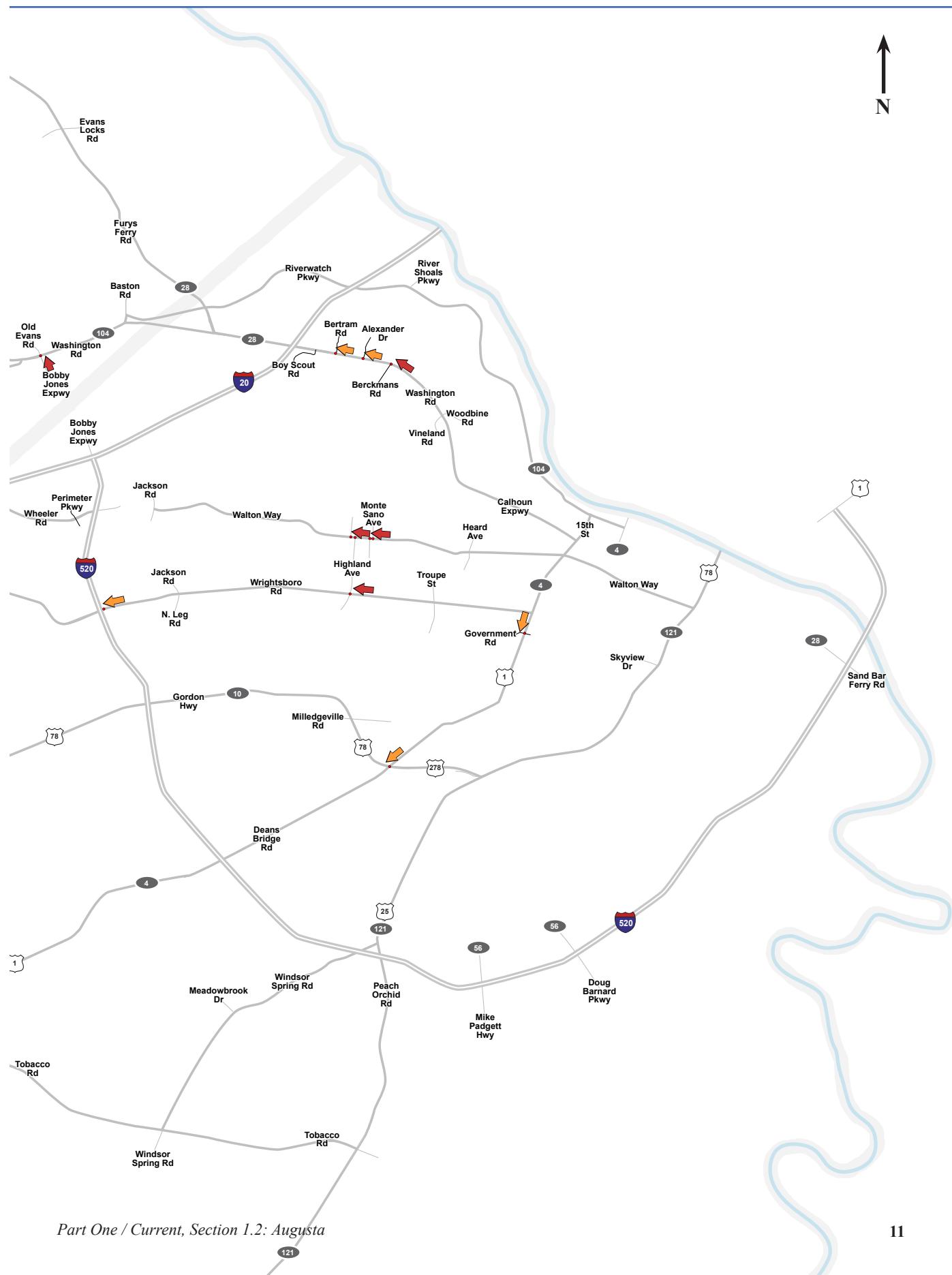


## Bottleneck Maps Legend

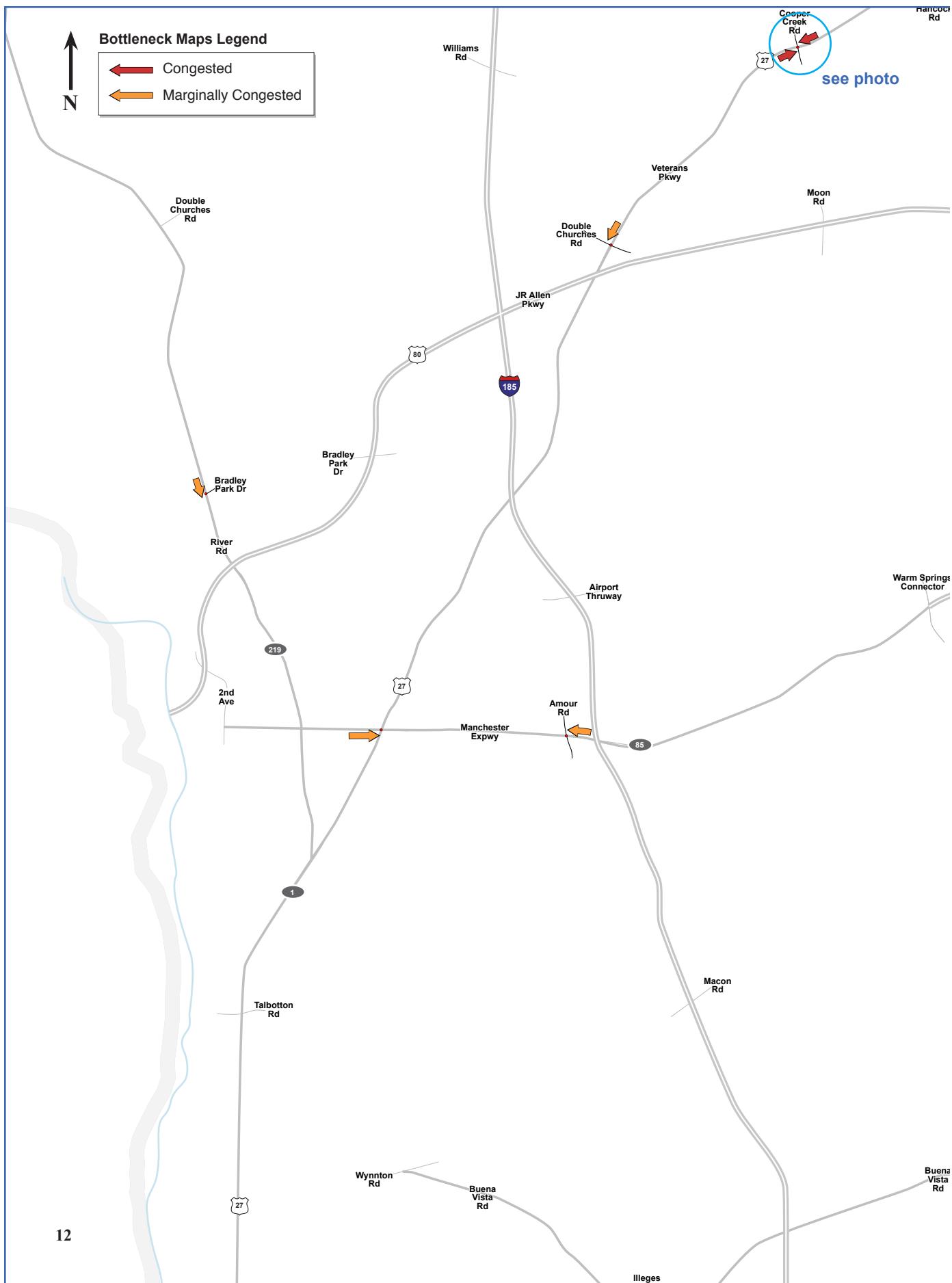
- Congested
- Marginally Congested



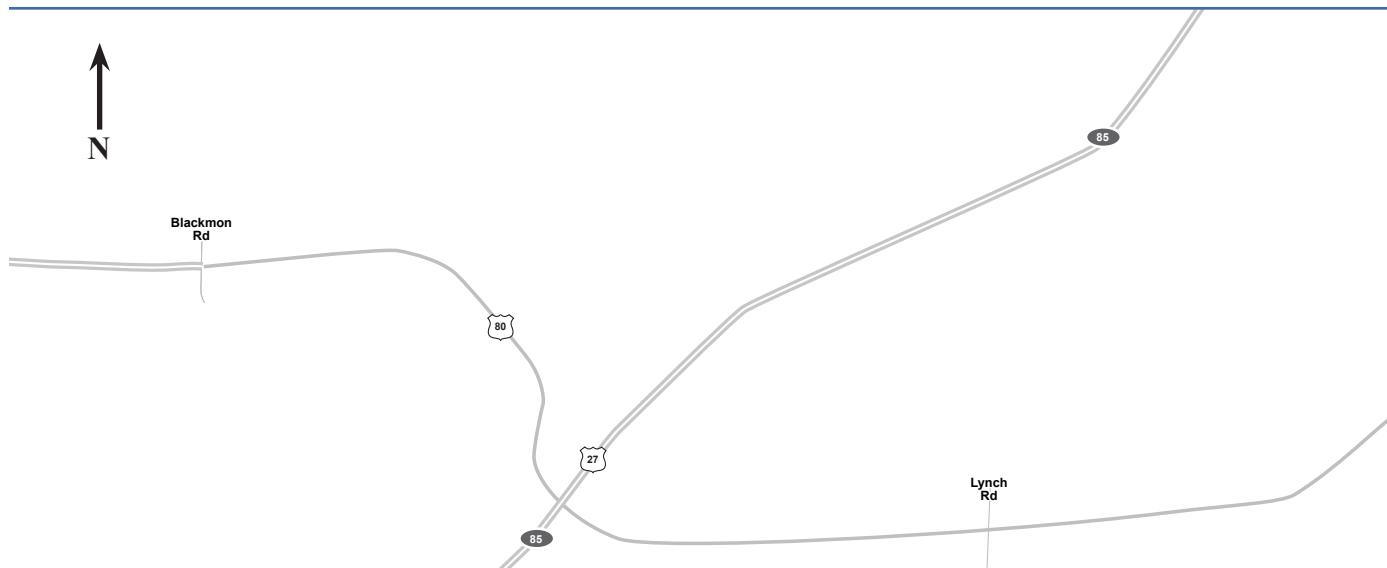
# AUGUSTA BOTTLENECK MAP EVENING 2010



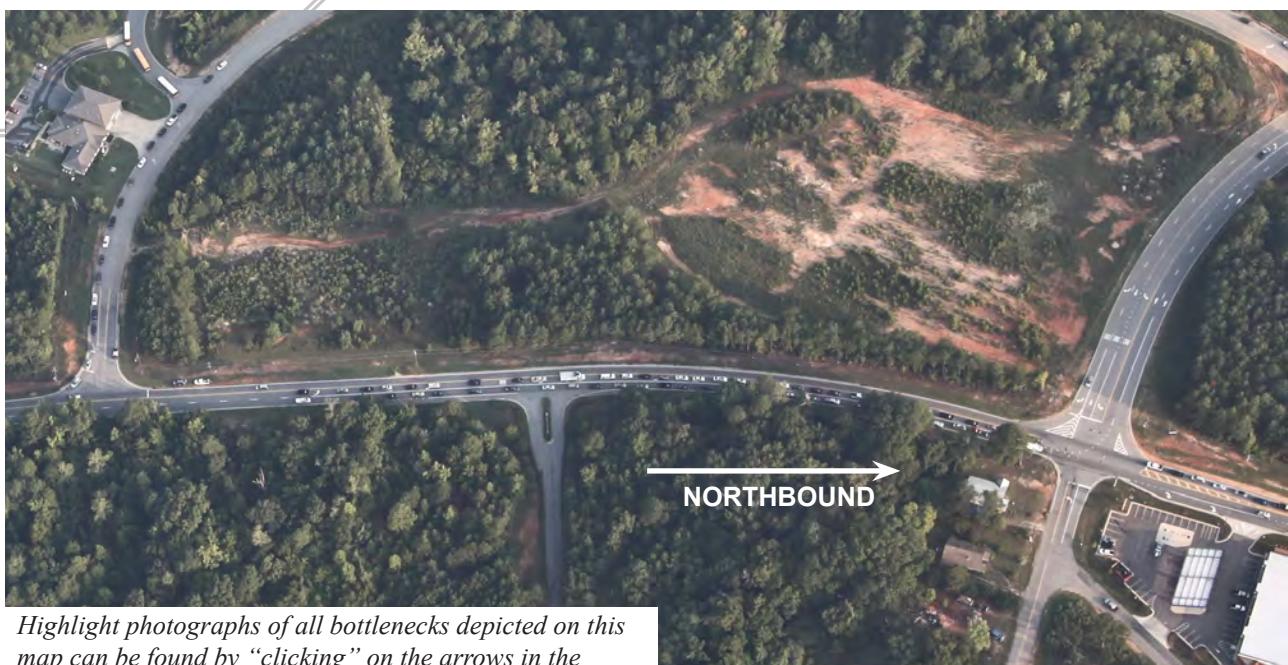
# COLUMBUS BOTTLENECK MAP MORNING 2010



## COLUMBUS BOTTLENECK MAP MORNING 2010

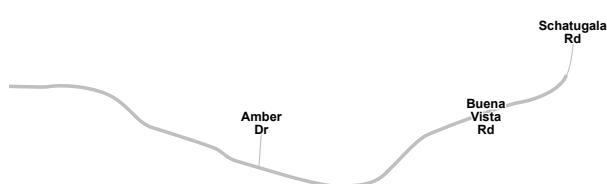


Sample Photograph

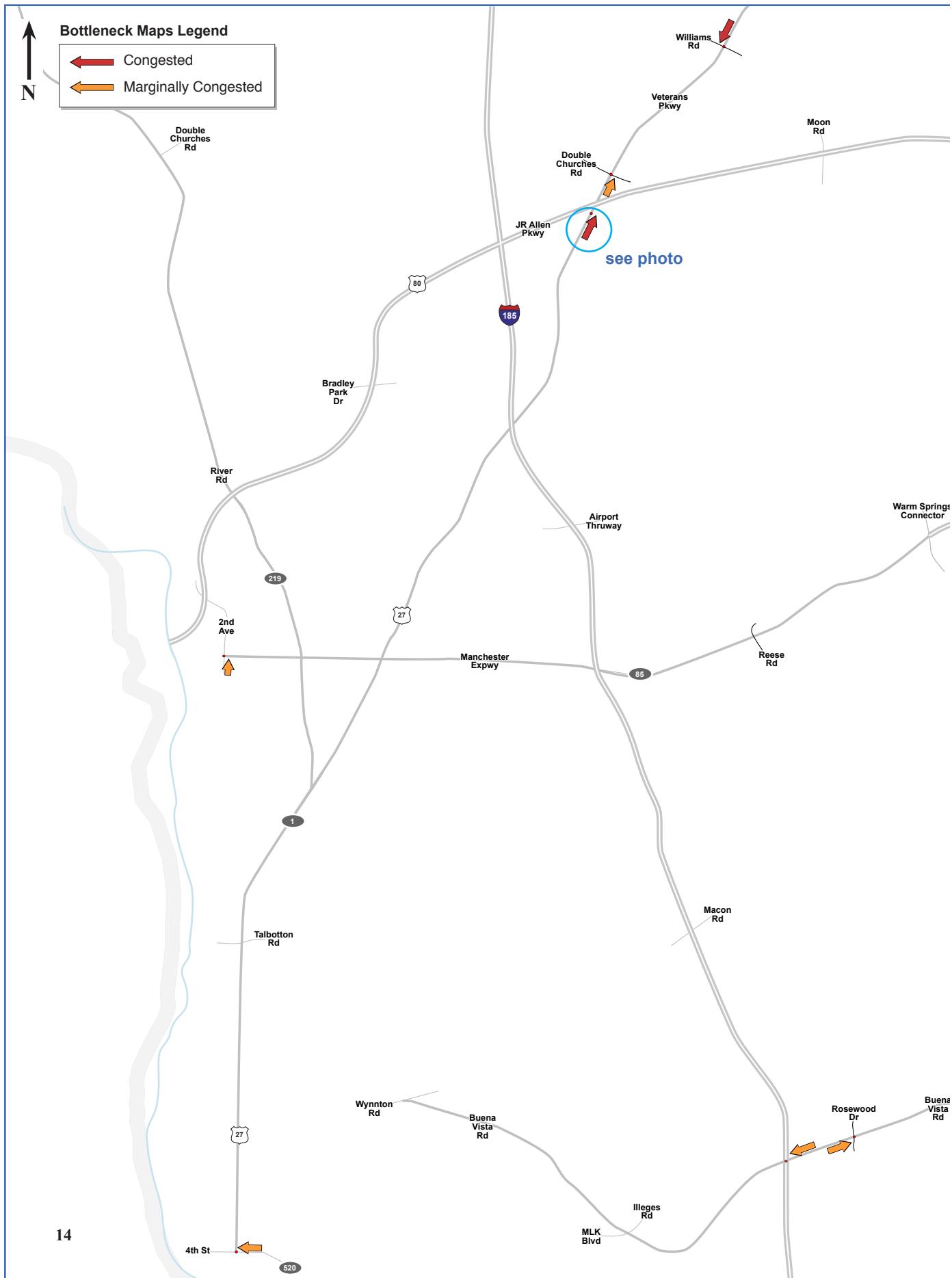


Highlight photographs of all bottlenecks depicted on this map can be found by “clicking” on the arrows in the interactive maps at [www.dot.ga.gov/statistics/trafficsurvey](http://www.dot.ga.gov/statistics/trafficsurvey).

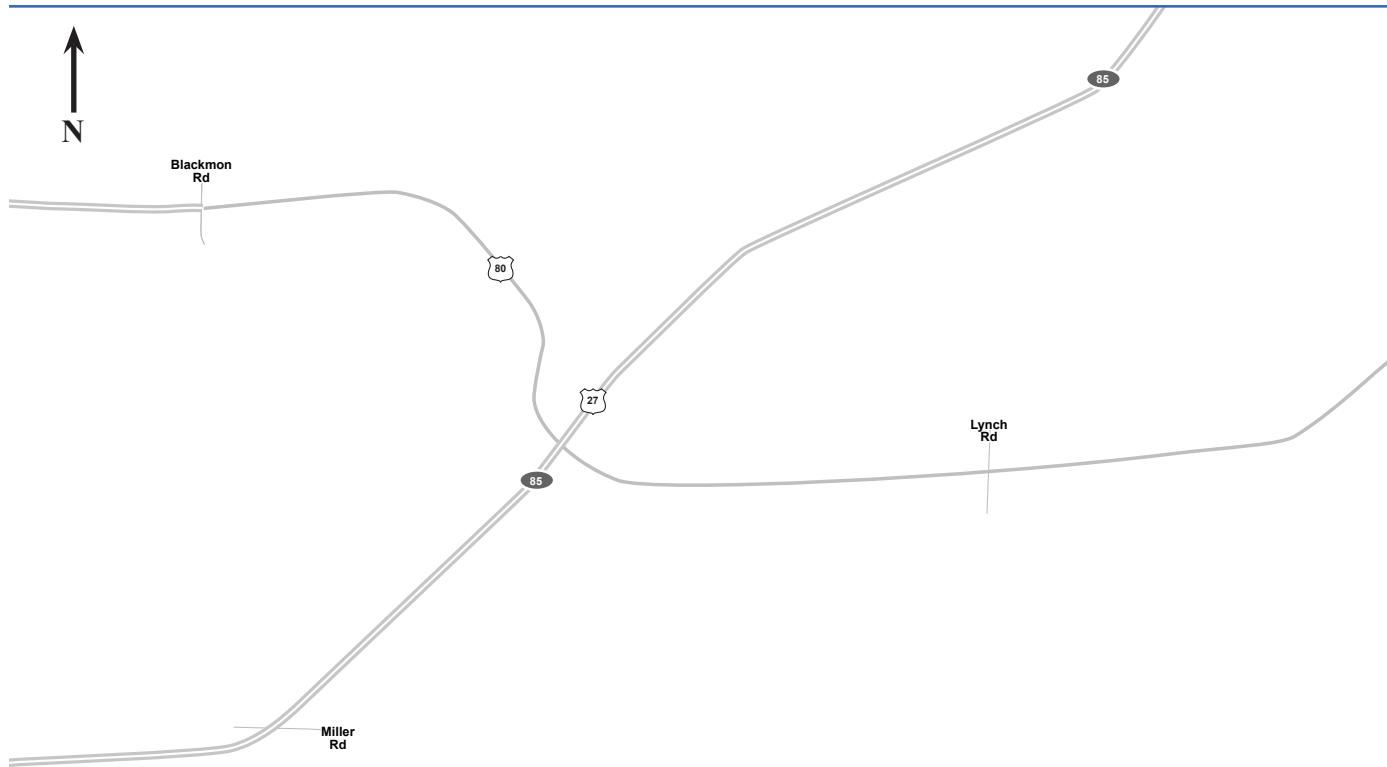
SR 1 / US 27 @ Cooper Creek Rd (August 24, 2010 8:17 A.M.)



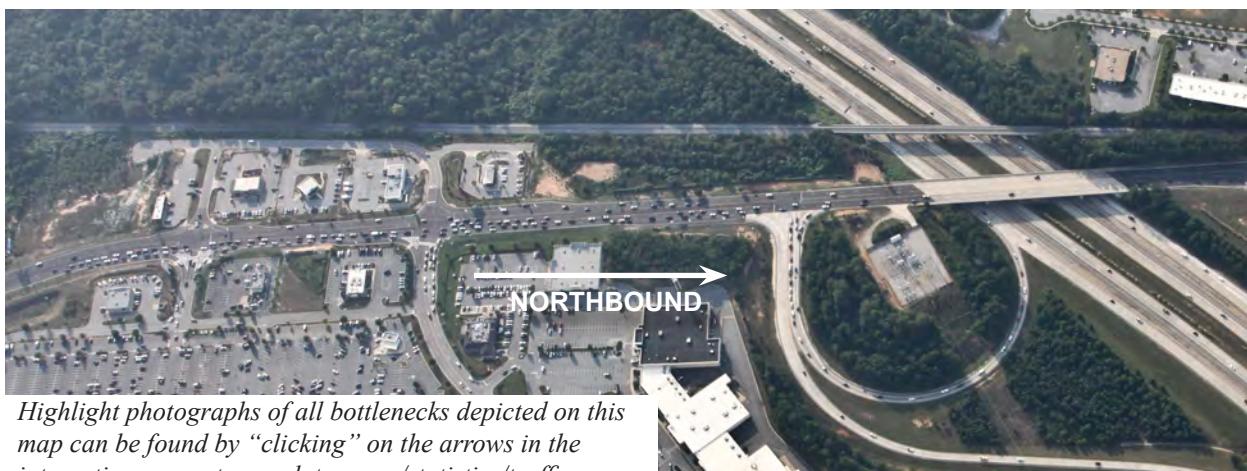
# COLUMBUS BOTTLENECK MAP EVENING 2010



## COLUMBUS BOTTLENECK MAP EVENING 2010

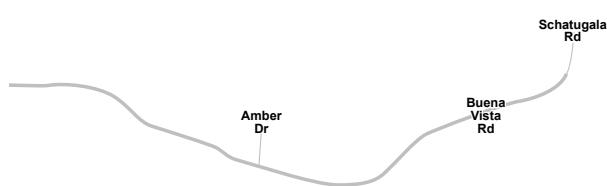


Sample Photograph

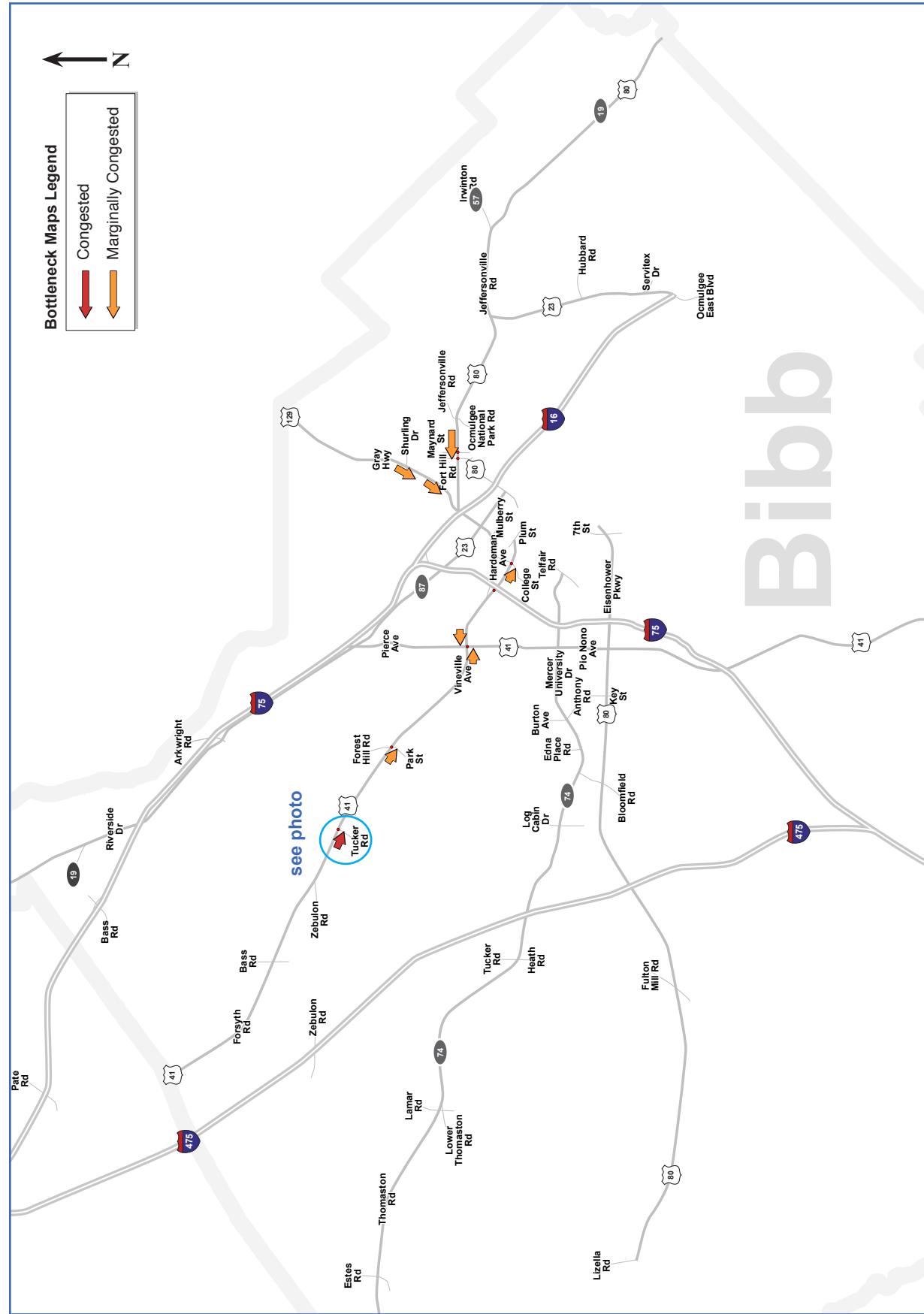


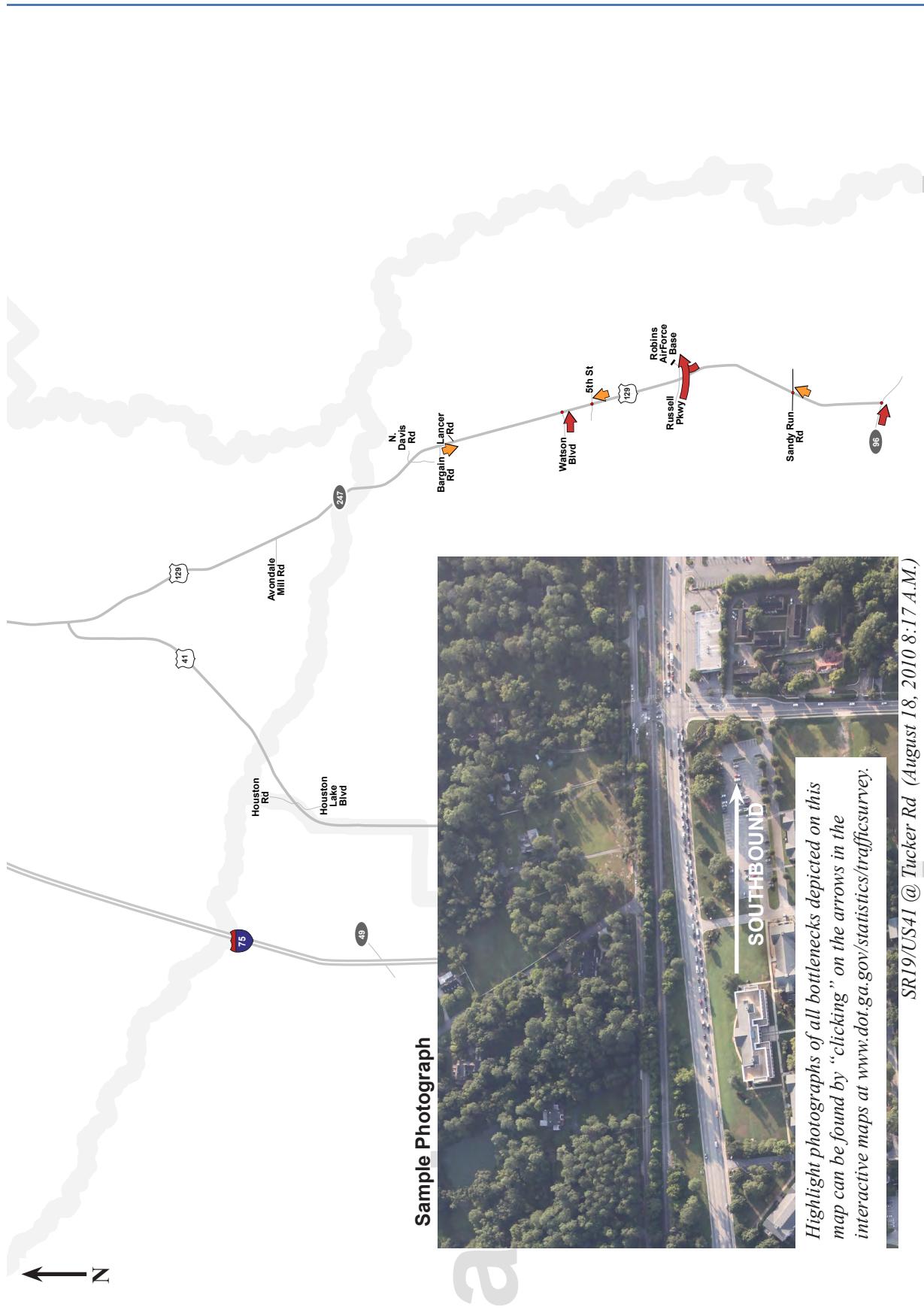
*Highlight photographs of all bottlenecks depicted on this map can be found by “clicking” on the arrows in the interactive maps at [www.dot.ga.gov/statistics/trafficsurvey](http://www.dot.ga.gov/statistics/trafficsurvey).*

SR 1 / US 27 @ US 80 (August 26, 2010 6:16 A.M.)

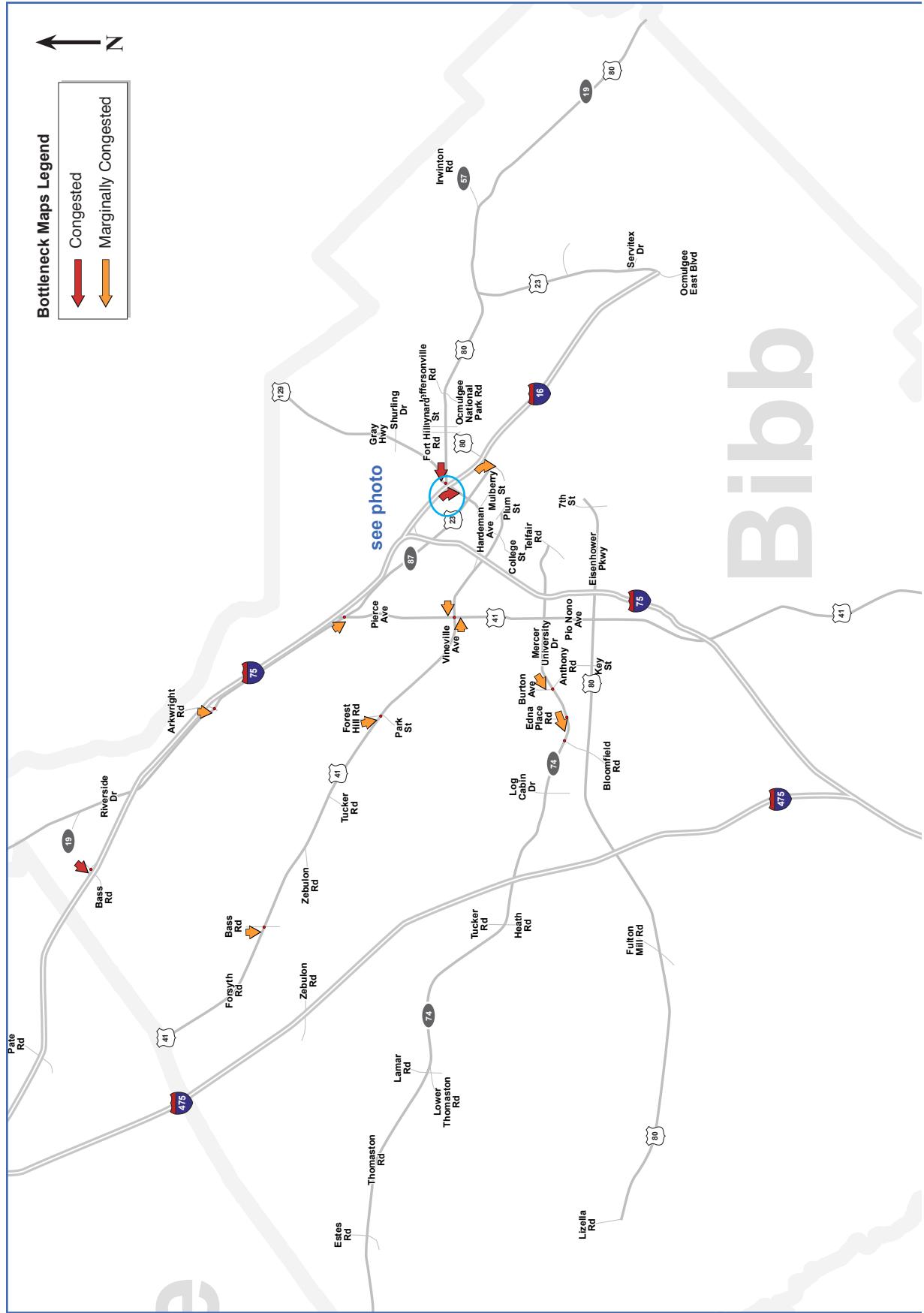


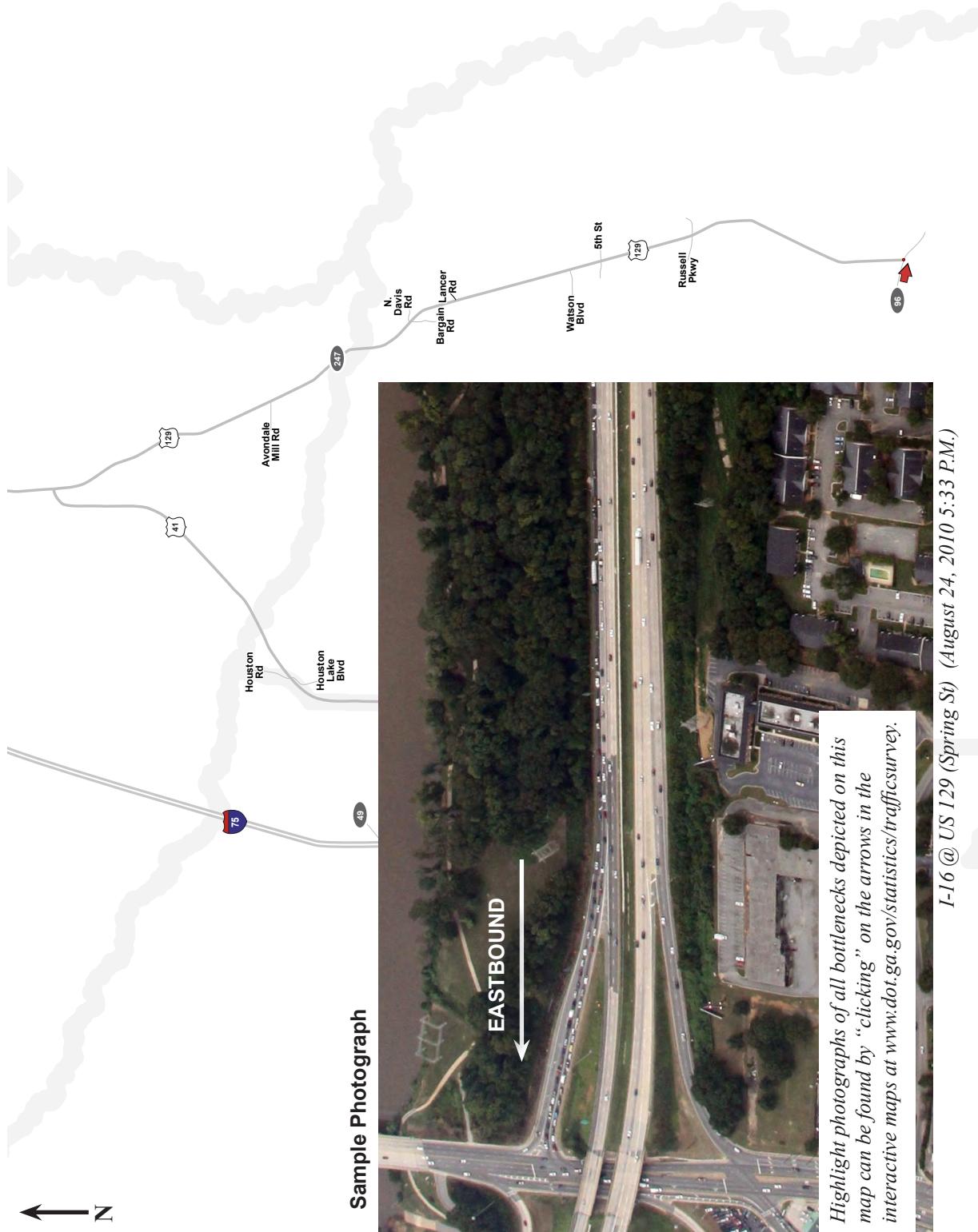
# MACON-WARNER ROBINS BOTTLENECK MAP MORNING 2010





# MACON-WARNER ROBINS BOTTLENECK MAP EVENING 2010







## **PART TWO / COMPARISON:**

### **Bottleneck Changes, 2010 Update**

*Part Two* compares findings from the aerial surveys conducted in 2010 and 2002; the sections listed below highlight locations where significant mobility changes were documented.

Section 2.1 presents many sites with improved mobility resulted directly from bottleneck elimination projects. These sites are presented with descriptions of what work was done, augmented with before-and-after aerial photographs that show the impact on traffic flow.

Section 2.2 identifies specific locations where congestion spread on the highway system (also augmented with before-and-after photography).

Section 2.3 consists of a set of comparative maps (region-wide), which are modified versions of the bottleneck maps found in Part One; these maps introduce the use of different colored arrows to depict locations where significant mobility changes were documented, and locations where similar congestion was found during each of the surveyed years.

# PART TWO / COMPARISON:

## Section 2.1: Impact of Projects on Mobility

### 2010 vs 2002

This section highlights locations where project improvements impacted mobility. These sites are presented with descriptions of what work was done, augmented with before-and-after aerial photographs that show the impact on traffic flow.

#### Savannah

SR 25 from SR 204 to Dean Forest Rd

Harry Truman Pkwy at SR 21

SR 204 from SR 25 to Rio Rd

SR 26 from SR 17 to GA Hwy 17/80

SR 26 at Rogers St

SR 204 at Tibet Ave

SR 204 at Montgomery Cross Rd

SR 204 at Stephenson Ave

SR 25 from Ogeechee River to SR 204

SR 21 at SR 30

#### Augusta

SR 28 at Boy Scout Rd

Wheeler Rd (CR 601) at I-520

SR 104 (Washington Rd) at Baston Rd

#### Columbus

US 27 at Cooper Creek Rd

#### Macon-Warner Robins

SR 74 west of I-475

SR 87 from Hall Rd to Northside Dr

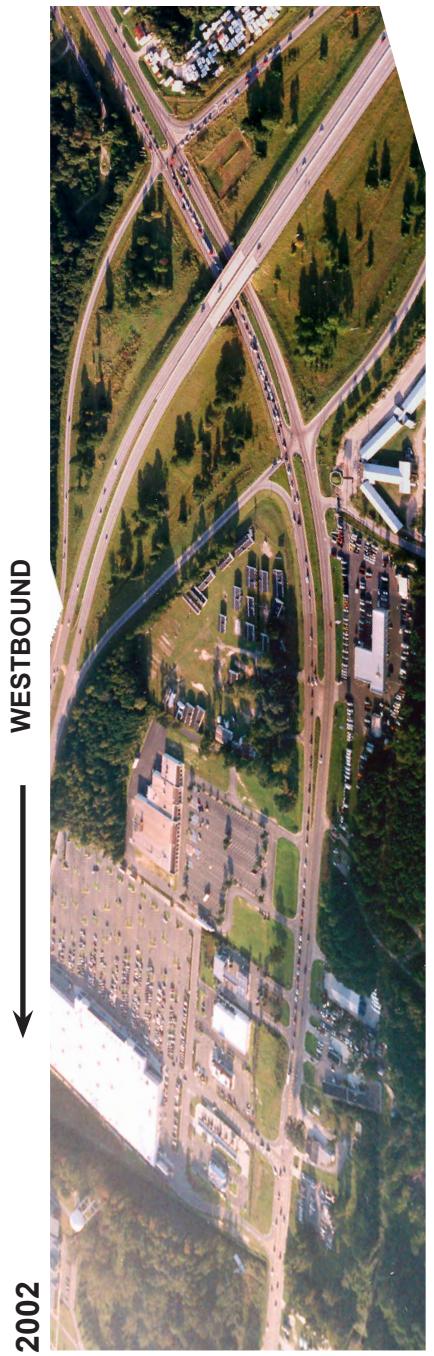
Comparative Traffic Conditions:	Legend for Comparative Graphics
IMPROVED:	Green arrow pointing down: Marginally congested in 2010, congested in 2002 Green arrow pointing up: Not congested in 2010, congested in 2002
DEGRADED:	Red arrow pointing down: Congested in 2010, not congested in 2002 Orange arrow pointing up: Marginally congested in 2010, not congested in 2002
NO CHANGE:	Black arrow pointing down: Congested in 2010 and 2002 Grey arrow pointing up: Marginally congested in 2010 and 2002

## SAVANNAH PROJECT IMPROVEMENT: SR 25 from Ogeechee River to SR 204 in Chatham County (Project ID: 521865)

Between the 2002 and 2010 surveys, SR 25 was widened from two to four lanes between the Ogeechee River and SR 204; a new traffic signal was also constructed at Chevis Rd.

During both the morning and evening surveys in 2002, congestion was found on SR 25 approaching the signal at the Walmart Supercenter; during the evening peak period, westbound congestion intermittently extended back through the SR 204 interchange.

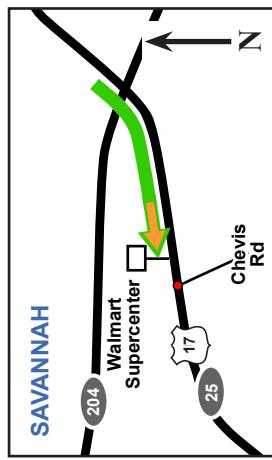
During the 2010 survey, travelers on this section of SR 25 experienced little or no delay, the exception being intermittent westbound congestion (minor) in the evening at the Walmart Supercenter signal.



2002  
→ WESTBOUND



2010  
→ WESTBOUND

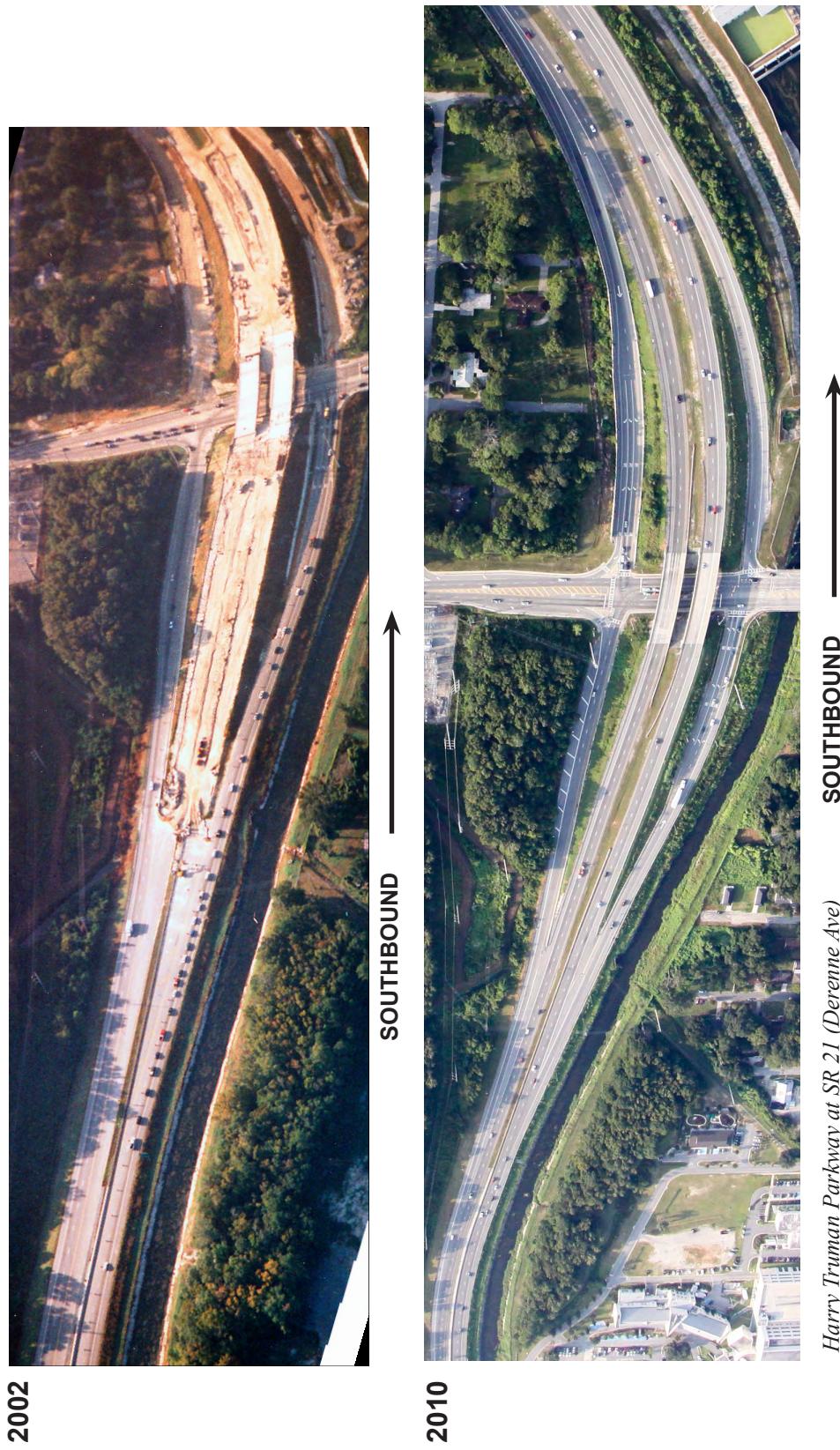


EVENING

SR 25 at SR 204 (left edge of 2010 photos shows reconstructed intersection at Chevis Rd)

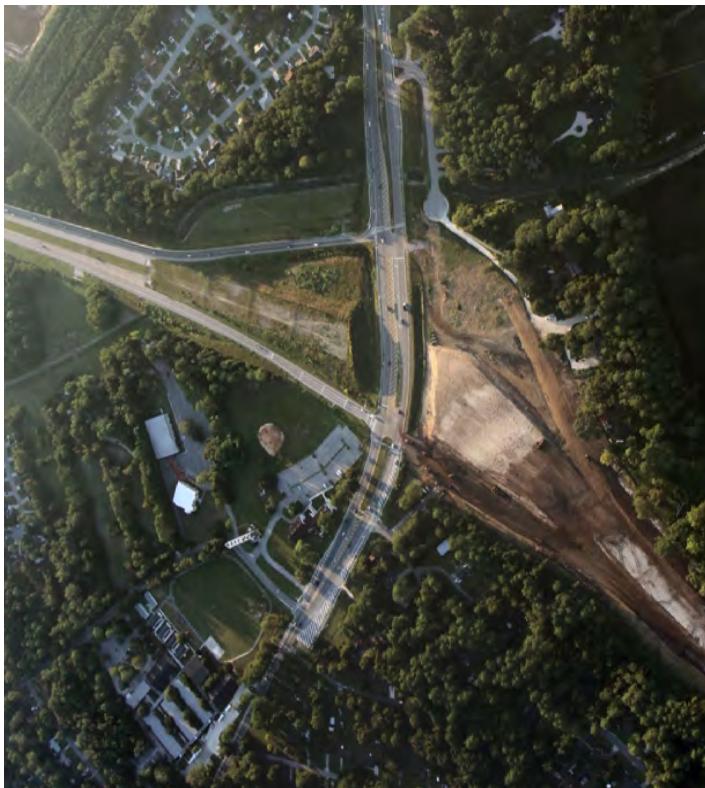
## **SAVANNAH PROJECT IMPROVEMENT: Harry Truman Parkway from SR 21 (Derenne Ave) to SR 204 Spur in Chatham County (Project ID: 521505)**

During the 2002 survey, the interchange at Harry Truman Pkwy and SR 21 (Derenne Ave) was under construction; a four-phase new construction project was underway to extend Harry Truman Pkwy 4.5 miles south to SR 204 Spur (Whitfield Ave). Project ID 0002921 (Phase V) is currently underway extending the parkway from Whitfield Ave to SR 204 (Abercorn St). The green arrows depicted in the graphic show locations where congestion was found during the 2002 survey, and not during the 2010 survey. Despite the likely increase in traffic demand since 2002, the new limited-access highway apparently has eliminated congestion on parallel arterial routes.

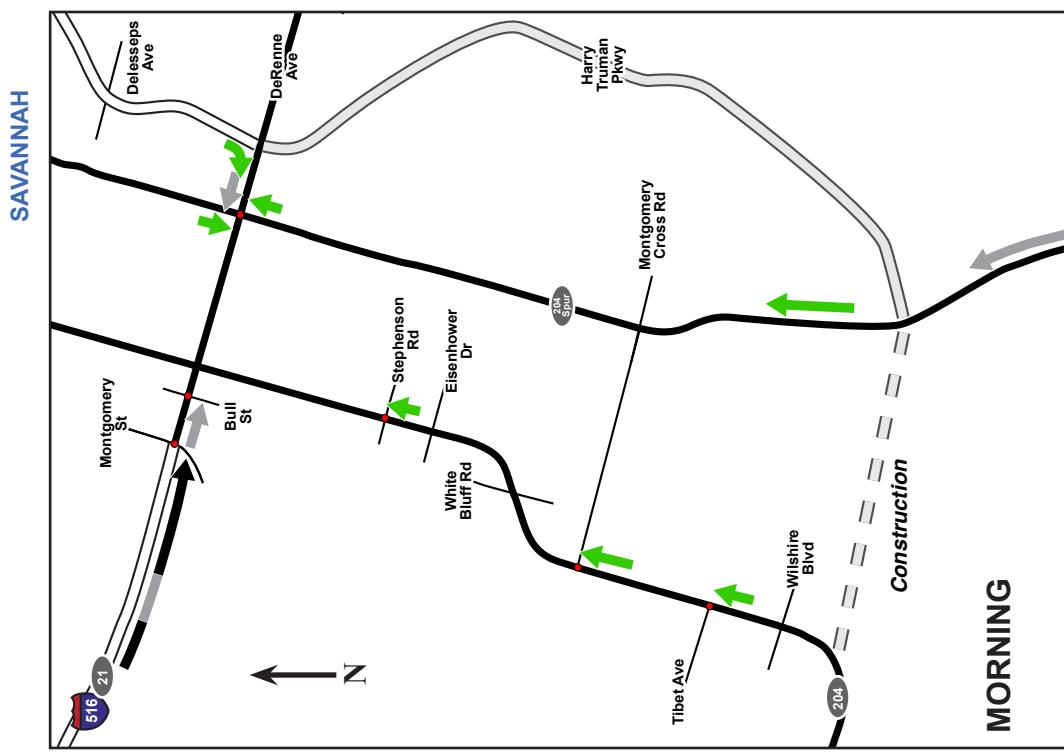


(continued from above)

2010



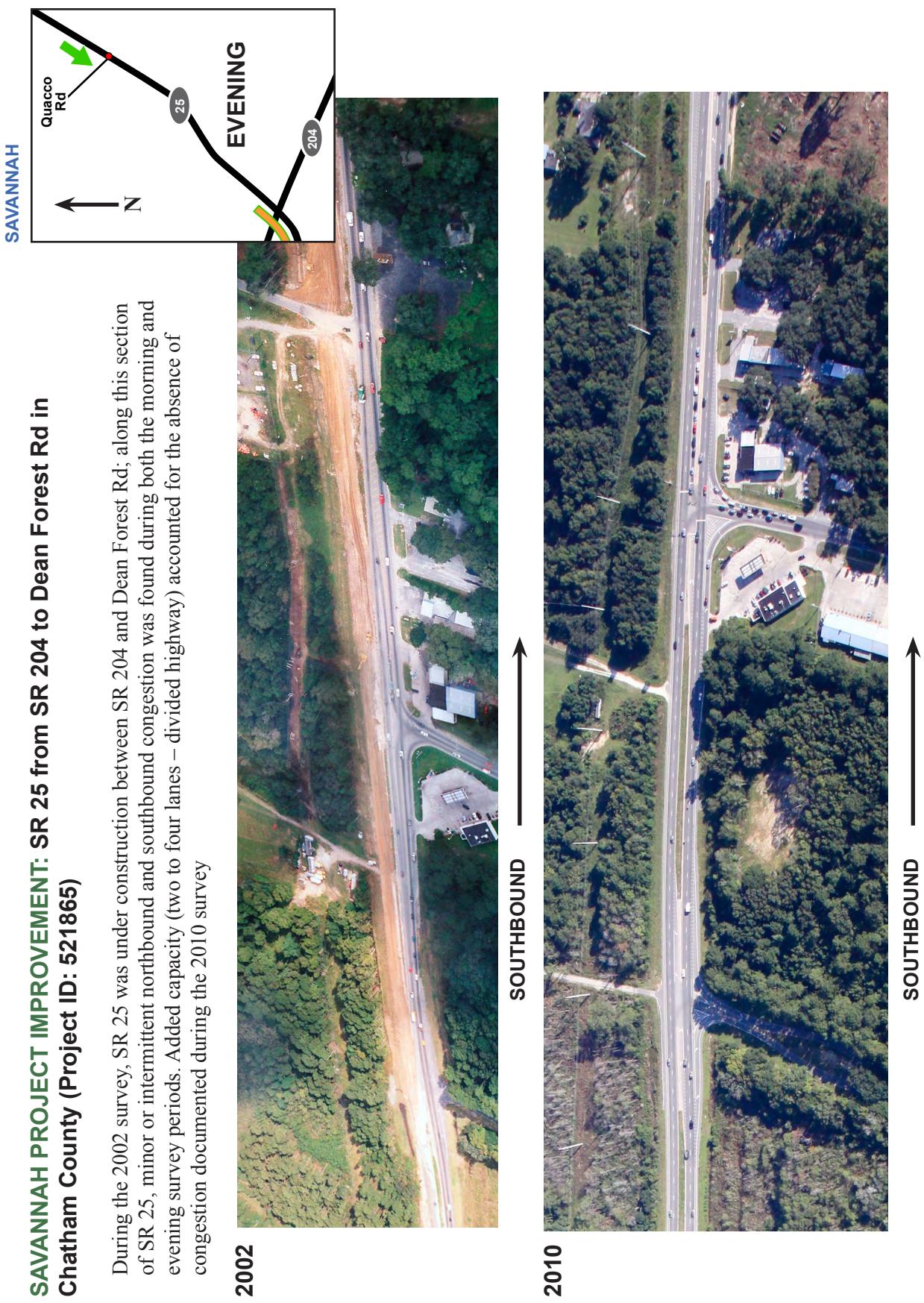
2002



New interchange at Harry Truman Pkwy and SR 204 Spur (Whitefield Ave). The 2010 photo also shows construction (Phase V) which will ultimately connect Harry Truman Pkwy from SR 204 Spur to SR 204 (Abercorn St.).

## SAVANNAH PROJECT IMPROVEMENT: SR 25 from SR 204 to Dean Forest Rd in Chatham County (Project ID: 521865)

During the 2002 survey, SR 25 was under construction between SR 204 and Dean Forest Rd; along this section of SR 25, minor or intermittent northbound and southbound congestion was found during both the morning and evening survey periods. Added capacity (two to four lanes – divided highway) accounted for the absence of congestion documented during the 2010 survey



## **SAVANNAH PROJECT IMPROVEMENT: SR 204 (Abercorn St) from SR 25/US 17 to Rio Rd in Chatham County (Project ID: 522870)**

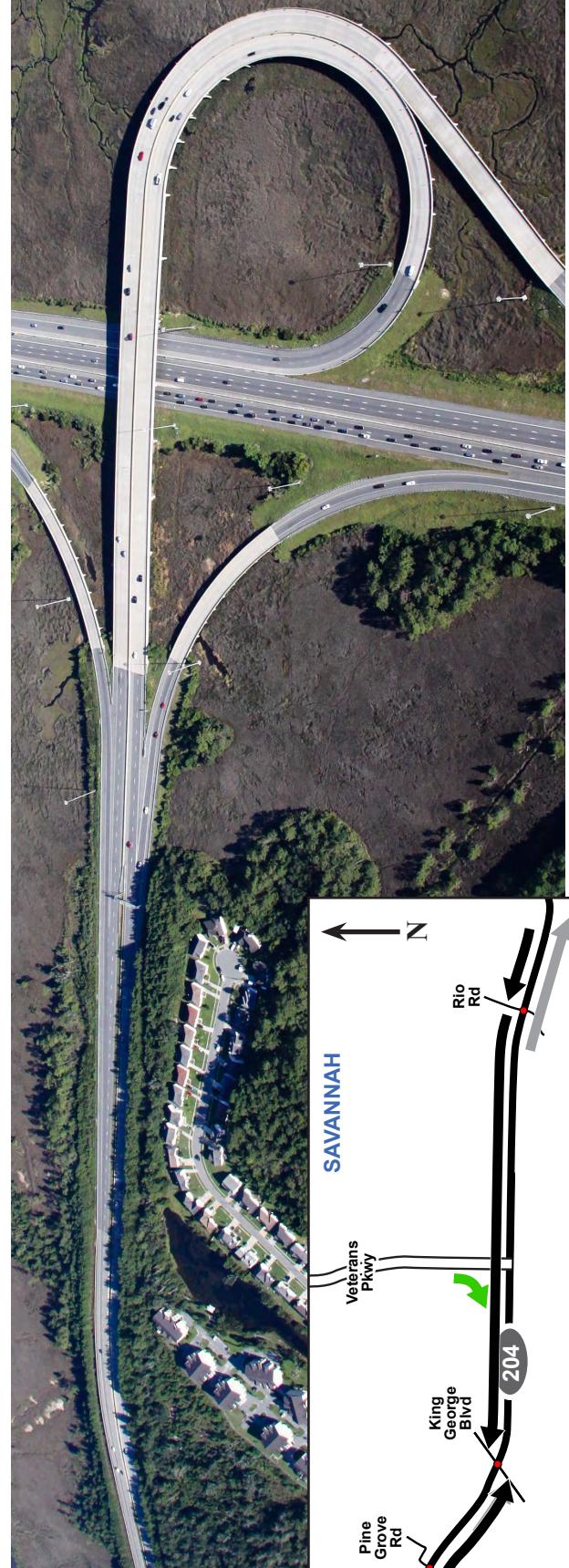
**2002**



During the 2002 survey, SR 204 was under construction between SR 25/US 17 and Rio Rd; the rehabilitation program included widening and interchange construction. In 2002, southbound congestion was intermittently found on Veterans Pkwy during the evening survey period approaching the signal at the terminus at SR 204; interchange reconstruction included the elimination of this traffic signal.

**2010**

**SOUTHBOUND**



**Veterans Parkway at SR 204 (Abercorn St)**

**SOUTHBOUND**

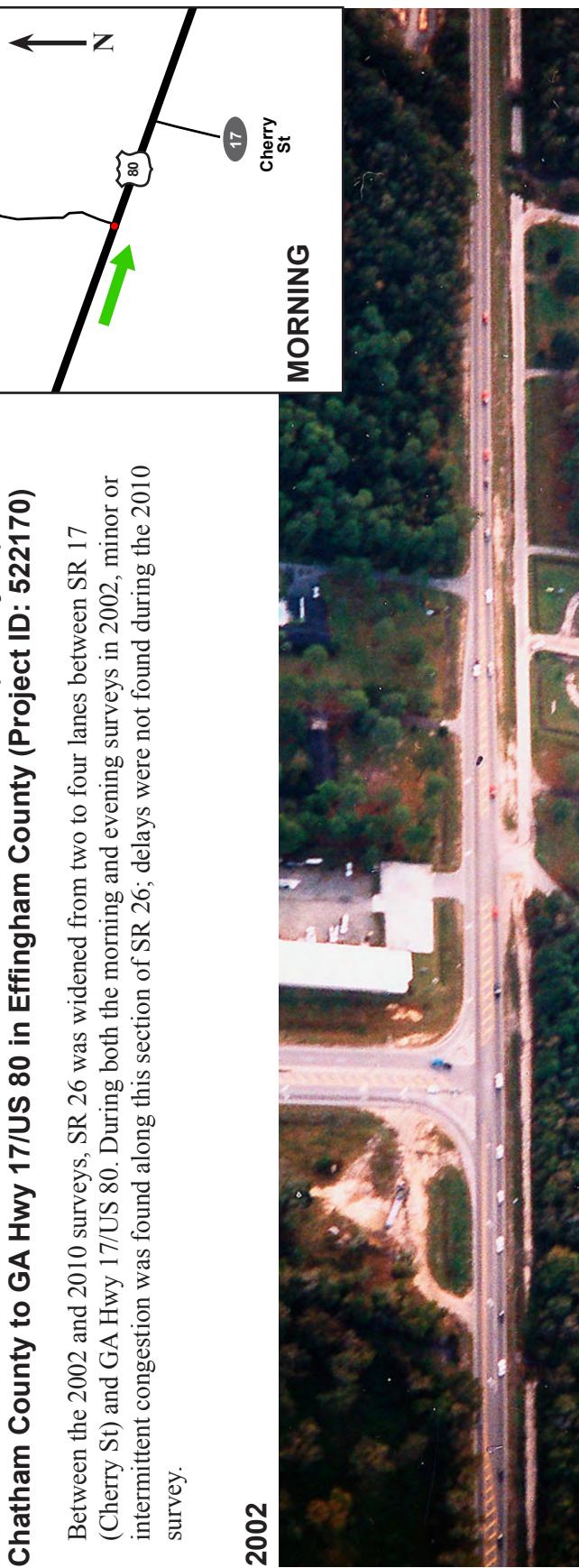
**EVENING**



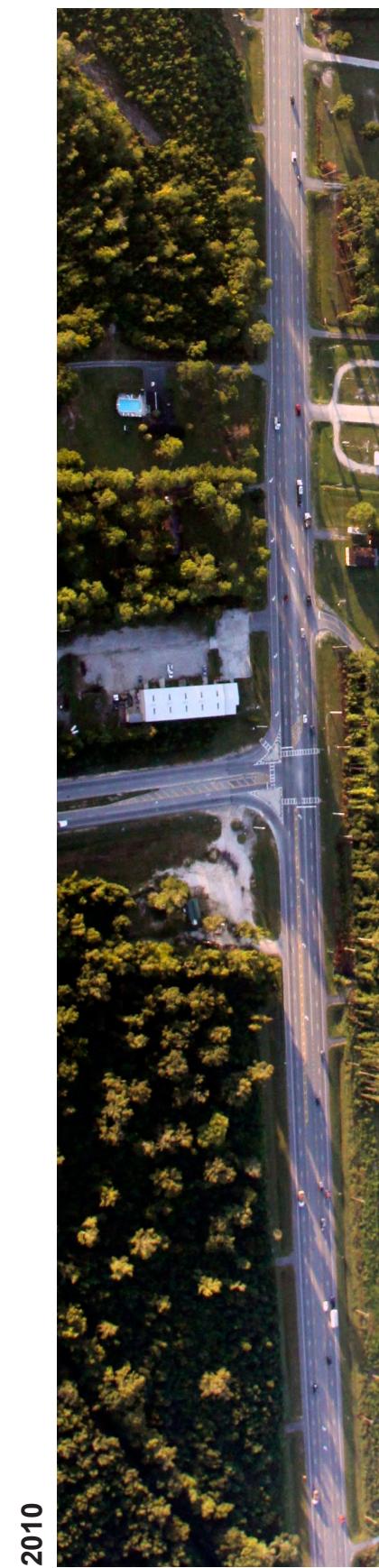
## SAVANNAH

### SAVANNAH PROJECT IMPROVEMENT: SR 26/US 80 from SR 17 (Cherry St) in Chatham County to GA Hwy 17/US 80 in Effingham County (Project ID: 522170)

Between the 2002 and 2010 surveys, SR 26 was widened from two to four lanes between SR 17 (Cherry St) and GA Hwy 17/US 80. During both the morning and evening surveys in 2002, minor or intermittent congestion was found along this section of SR 26; delays were not found during the 2010 survey.



EASTBOUND

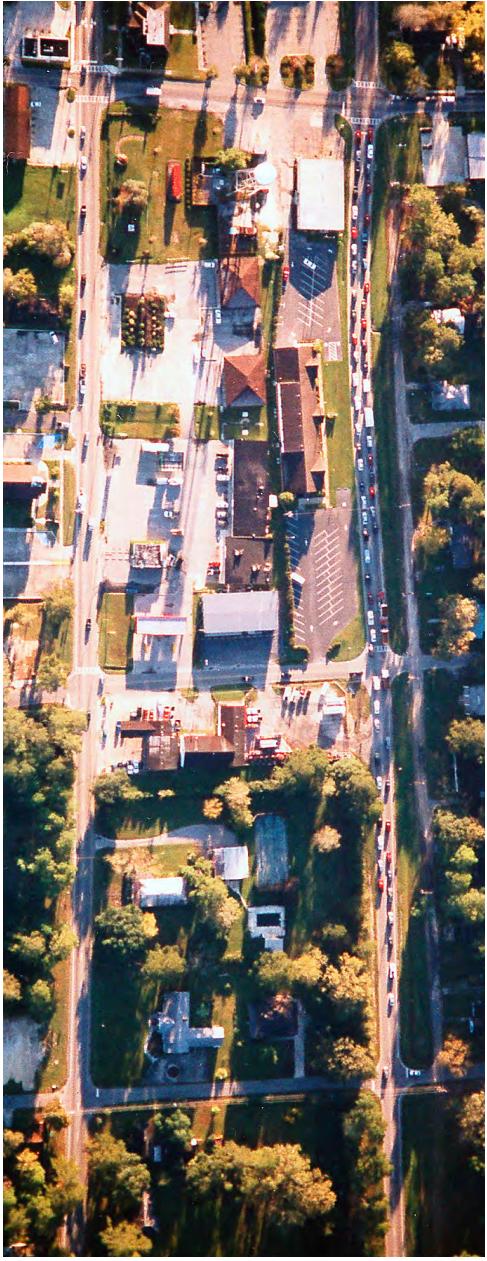


EASTBOUND

*SR 26 at Jimmy Deloach Parkway*

## SAVANNAH PROJECT IMPROVEMENT: SR 26/US 80 at Rogers St in Chatham County

2002



2010

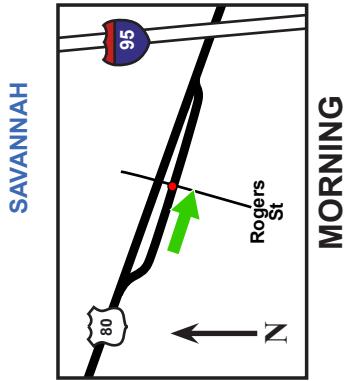


EASTBOUND

EASTBOUND

SR 26 at Rogers St

Between the 2002 and 2010 surveys, intersection improvements were completed at SR 26/Rogers St; a dedicated left-turn lane was added on the southbound approach on Rogers St. During the morning survey in 2002, eastbound congestion was found on SR 26 approaching the signal at Rogers St; added capacity at the intersection, and likely retiming of the signals, may have accounted for the absence of congestion documented during the 2010 survey.



MORNING

EASTBOUND

EASTBOUND

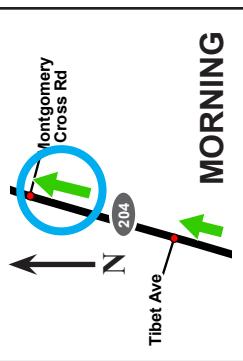
## SAVANNAH PROJECT IMPROVEMENT: SR 204 at Tibet Ave in Chatham County (Project ID: 532570)

Between the 2002 and 2010 surveys, intersection improvements were completed at SR 204/Tibet Ave; additional turn lanes were added on each of the four approaches to the intersection. During the morning survey in 2002, northbound congestion was found on SR 204 approaching the signal at Tibet Ave; added capacity at the intersection likely accounted for the absence of northbound congestion documented during the 2010 survey.



## SAVANNAH PROJECT IMPROVEMENT: SR 204 at Montgomery Cross Rd in Chatham County

SAVANNAH



Between the 2002 and 2010 surveys, intersection improvements were completed at SR 204/Montgomery Cross Rd; a dedicated right-turn lane was added on the northbound approach to the intersection. During the morning survey in 2002, northbound congestion was found on SR 204 approaching the signal at Montgomery Cross Rd; added capacity at the intersection likely accounted for the absence of congestion documented during the 2010 survey.

2002



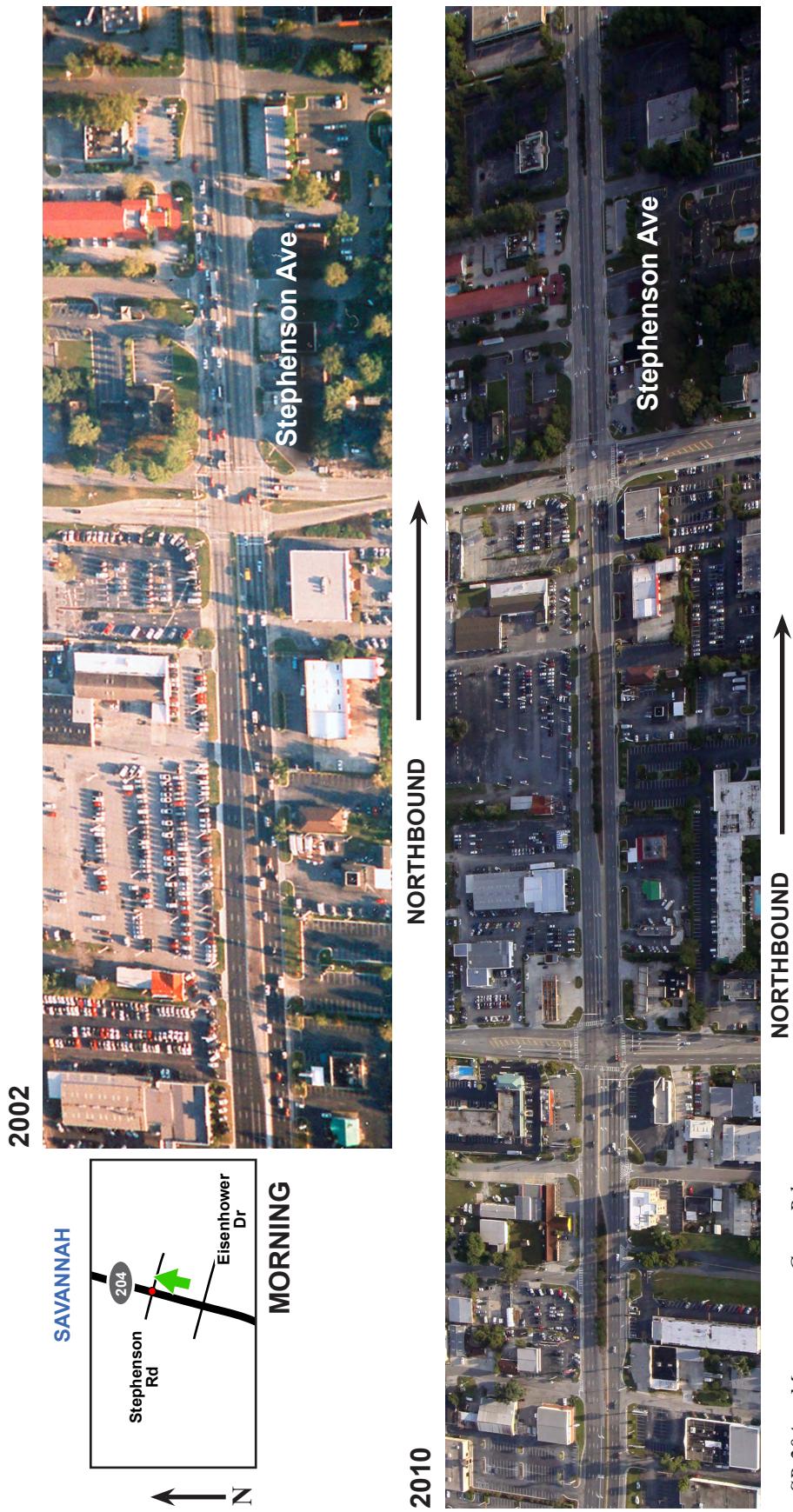
2010



SR 204 at Montgomery Cross Rd

## **SAVANNAH PROJECT IMPROVEMENT: SR 204 at Stephenson Ave in Chatham County**

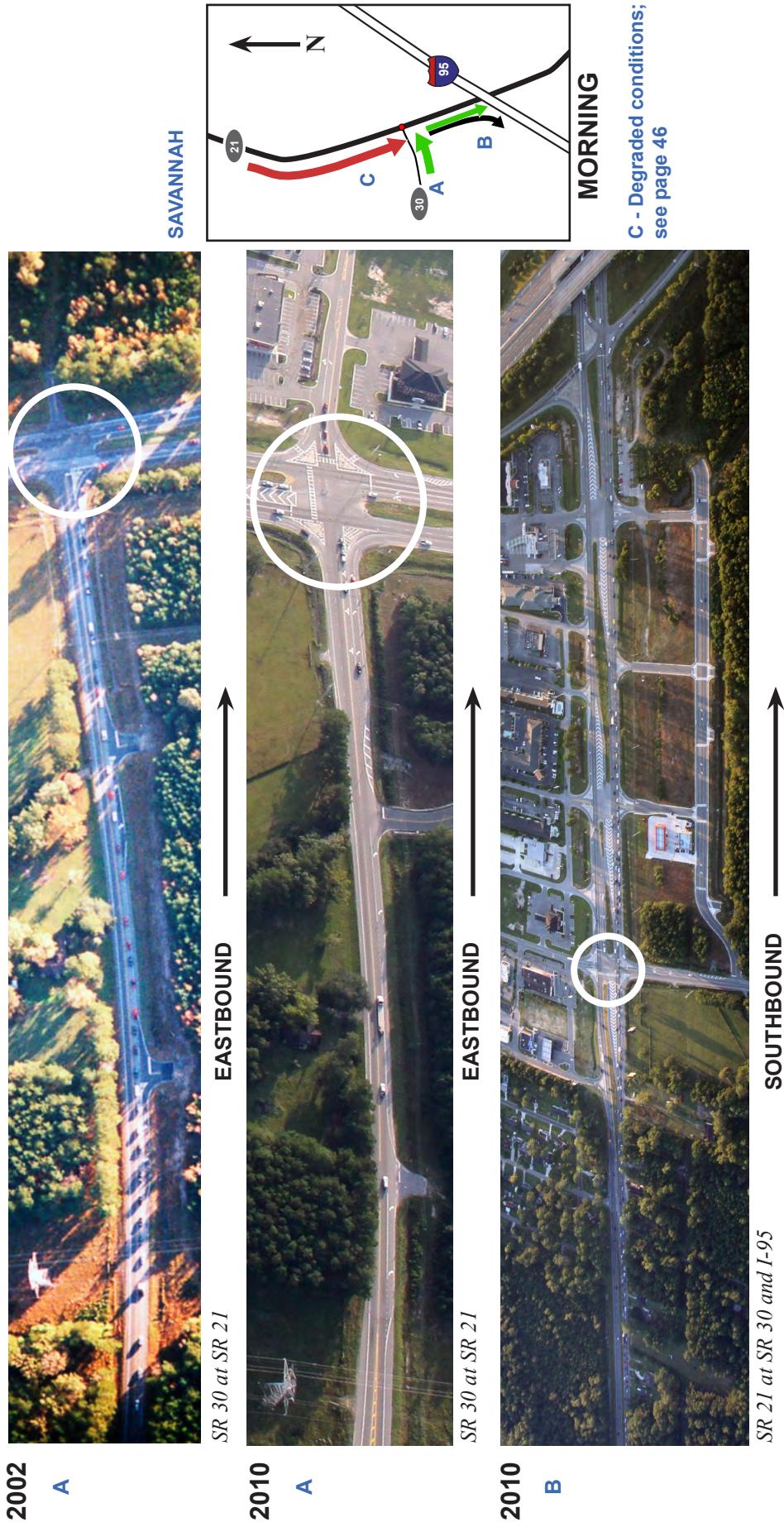
During the morning survey in 2002, northbound congestion was found on SR 204 approaching the signal at Stephenson Ave. Between the 2002 and 2010 surveys, intersection improvements were completed at SR 204/Stephenson Ave; added capacity on the northbound and westbound approaches, and likely re-timing of the signals, contributed to the absence of congestion documented here in 2010.



## SAVANNAH PROJECT IMPROVEMENT: SR 21 at SR 30 in Chatham County (Project ID: M003685)

Between the surveys in 2002 and 2010, the intersection at SR 21/SR 30 was reconstructed; intersection improvements included additional turn lanes and the installation of a traffic signal. SR 21 was also widened from two to three lanes between SR 30 and I-95 (southbound direction only).

During the morning survey in 2002, eastbound congestion was found on SR 30 approaching SR 21; vehicles at the head of the queue had to wait for gaps in southbound traffic before merging into the right lane. The addition of a third lane now allows vehicles on SR 30 to turn onto SR 21 without having to merge into southbound flow; however, congestion was found in this lane on the approach to the I-95 southbound ramp.



## AUGUSTA PROJECT IMPROVEMENT: SR 28 (Savannah River Scenic Hwy) at Boy Scout Rd in Richmond County

2002

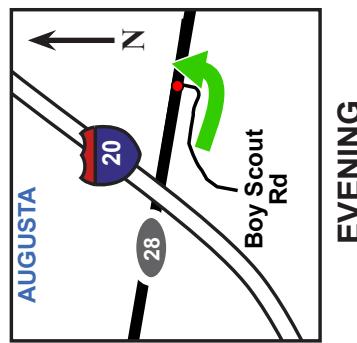


Between the 2002 and 2010 surveys, intersection improvements were completed at SR 28/Boy Scout Rd; a second dedicated left-turn lane was added on the northbound approach on Boy Scout Rd. During the evening survey in 2002, northbound congestion was found on Boy Scout Rd approaching the signal at SR 28; added capacity at the intersection likely accounted for the absence of congestion documented during the 2010 survey.

2010



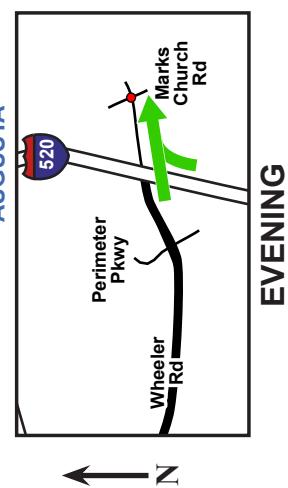
SR 28 at Boy Scout Rd (I-20 interchange at left edge)



## AUGUSTA PROJECT IMPROVEMENT: Wheeler Rd (CR 601) at I-520 in Richmond County



Between the 2002 and 2010 surveys, the interchange at I-520 and Wheeler Rd was reconstructed; the intersection east of I-520 at Wheeler Rd and Marks Church Rd was also reconstructed. The reconfigured interchange (see photos on this page) and added capacity at the intersection at Marks Church Rd has eliminated congestion that was found here during the 2002 evening survey.



## AUGUSTA PROJECT IMPROVEMENT: SR 104 (Washington Rd) at Baston Rd in Richmond County

2002



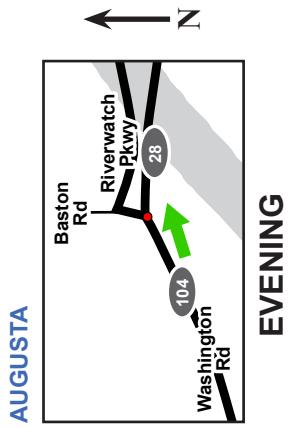
2010



EASTBOUND

SR 104 (Washington Rd) at Baston Rd

During the evening survey in 2002, eastbound congestion was found on SR 104 approaching the intersection at Baston Rd; construction at the intersection likely exacerbated the congestion. Intersection reconstruction included added capacity on the eastbound approach which accounted for the absence of congestion documented during the 2010 survey

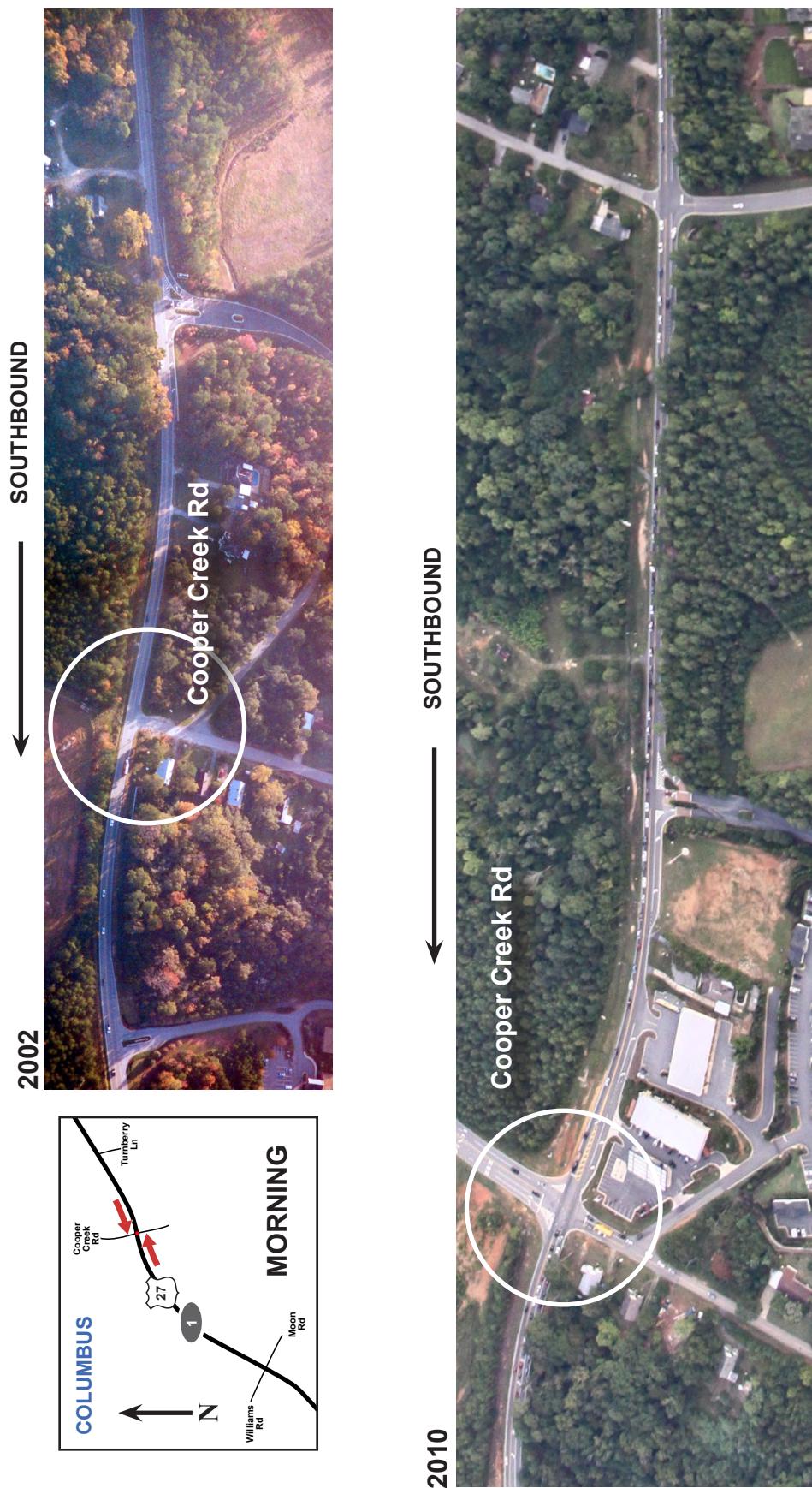


AUGUSTA

EVENING

## COLUMBUS PROJECT IMPROVEMENT: SR 1/US 27 at Cooper Creek Rd in Muscogee County, Morning (Project ID: 332820)

Since the 2002 survey, an improvement project was completed on SR 1 between Moon Rd and Turnberry Ln; the improvements included widening and reconstruction. Increased demand along this section of SR 1 was partly attributable to the opening of a new High School (Northside) and Middle School (Veteran's Memorial) on the north side, and a housing development on the south side. A new signal was constructed at Cooper Creek Rd along with the extension of Cooper Creek Rd on the north side of SR 1 (this new roadway connects to the high school and middle school). The graphic on this page depicts northbound and southbound congestion on SR 1 approaching the signal at Cooper Creek Rd (2010 survey findings).



**MACON PROJECT IMPROVEMENT: SR 87 (Riverside Dr) from Hall Rd to Northside Dr in Bibb County  
(Project ID: 322000)**

**2002**



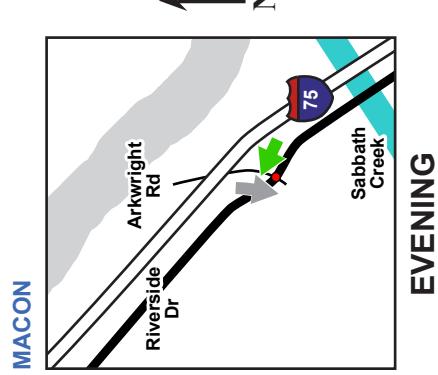
**NORTHBOUND**

**2010**



**NORTHBOUND**

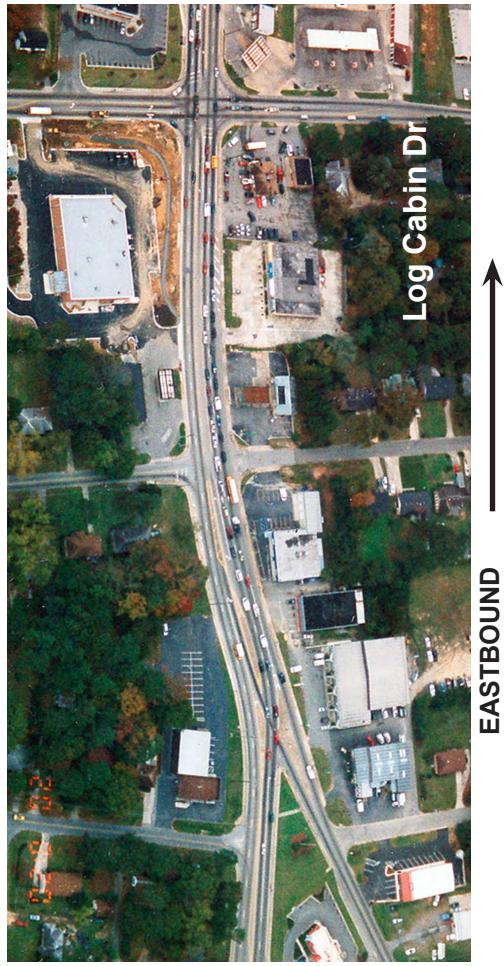
*SR 87 at Arkwright Rd (I-75 interchange at lower right)*



**EVENING**

## MACON PROJECT IMPROVEMENT: SR 74 from west of I-475 to Log Cabin Dr in Bibb County (Project ID: 350960)

2002

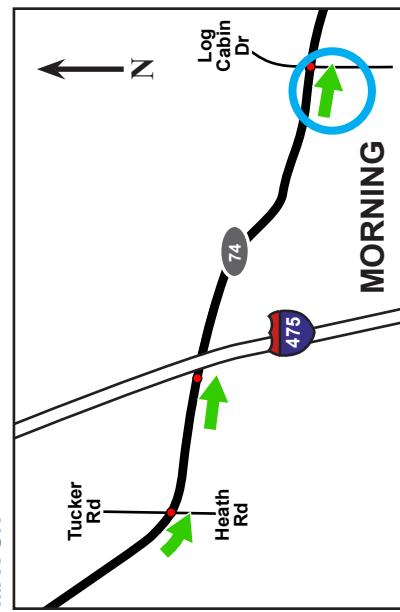


Between the 2002 and 2010 surveys, SR 74 was widened from the vicinity of Heath Rd to Log Cabin Dr. Added capacity at the intersections along this section of SR 74 likely eliminated congestion that was found during both the morning and evening surveys in 2002.

2010



MACON



SR 74 at Log Cabin Dr

EASTBOUND

EASTBOUND

# PART TWO / COMPARISON:

## Section 2.2: Spread of Congestion 2010 vs 2002

This section highlights locations where significant mobility degradations were found on the system. In screening sites for this section, an attempt was made to identify changes that were largely confirmed during most or all of the 2010 survey flights (minus the effects of confirmed or suspected incidents). While no apparent reason was identified for the degradation, increased demand due to growth likely contributed to the new congestion.

### Savannah

Eastbound I-16 in Chatham County

Westbound I-16 in Chatham County

SR 204 Spur at Ferguson Ave

SR 25 at Chatham Pkwy

SR 21 at Crossgate Rd

SR 21 at SR 30

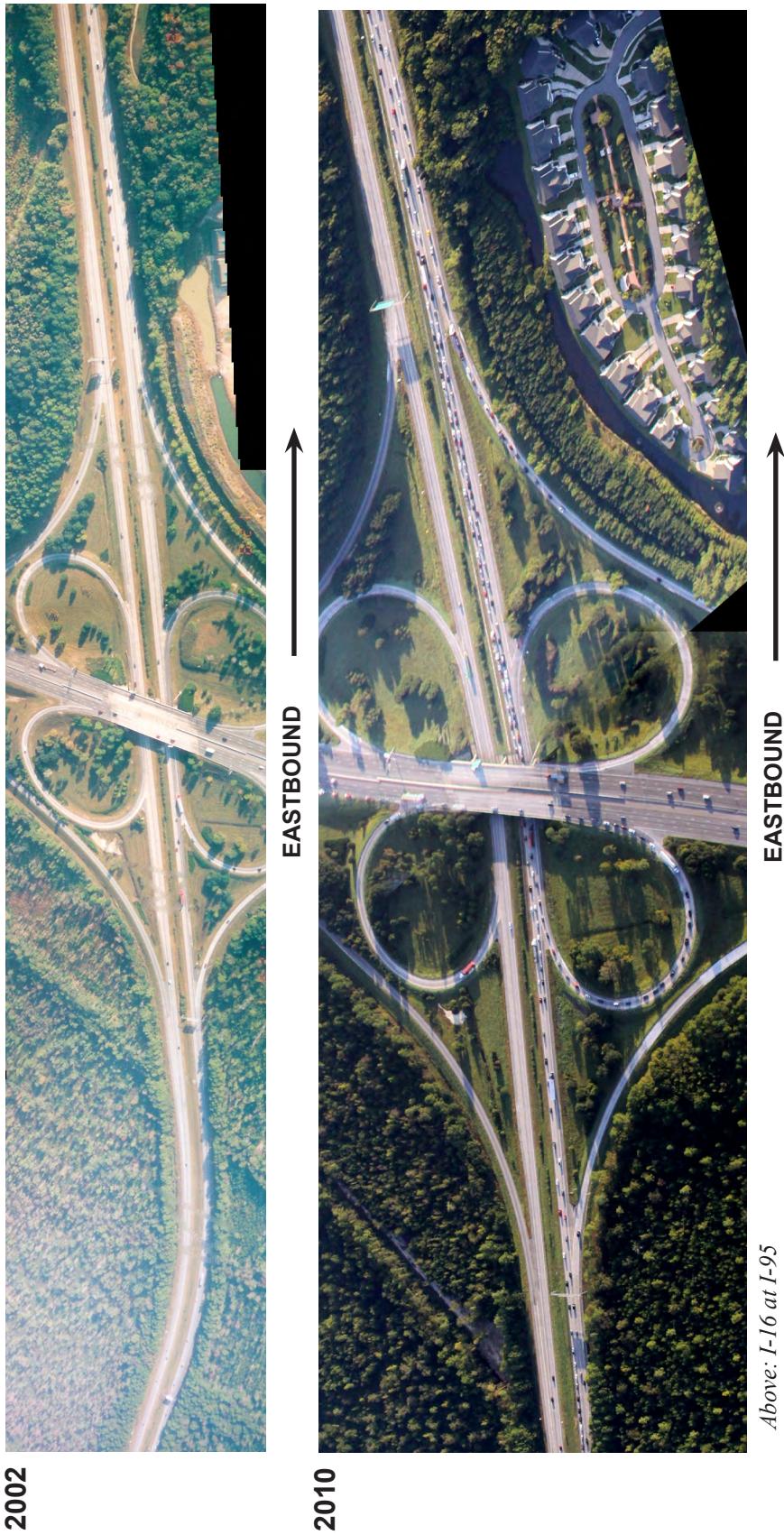
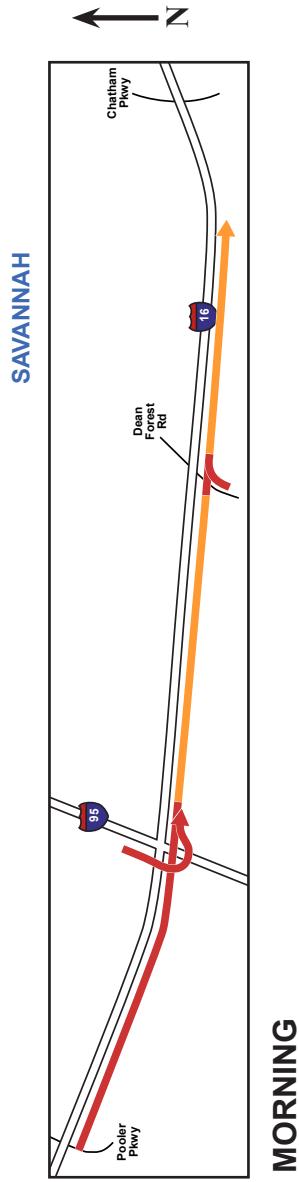
### Macon-Warner Robins

SR 96 at US 129

Comparative Traffic Conditions:	Legend for Comparative Graphics
IMPROVED:	Green arrow pointing down: Marginally congested in 2010, not congested in 2002
DEGRADED:	Red arrow pointing down: Not congested in 2010, congested in 2002
NO CHANGE:	Orange arrow pointing down: Congested in 2010, not congested in 2002
	Black arrow pointing down: Congested in 2010 and 2002
	Grey arrow pointing down: Marginally congested in 2010 and 2002

## **SAVANNAH FREEWAY DEGRADATION:** Eastbound I-16 in Chatham County, Morning

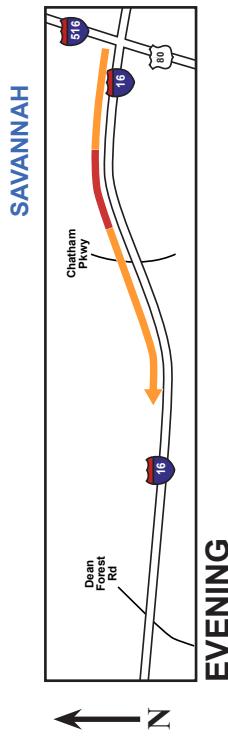
During the 2002 morning survey period, eastbound travelers typically maintained free flow speeds on I-16 in Chatham County. When surveyed again in 2010, eastbound congestion was found between Pooler Parkway and Chatham Parkway. Factors that appeared to contribute to the congestion included: 1) traffic entering at the ramps at I-95 and Dean Forest Rd; 2) sunglare.



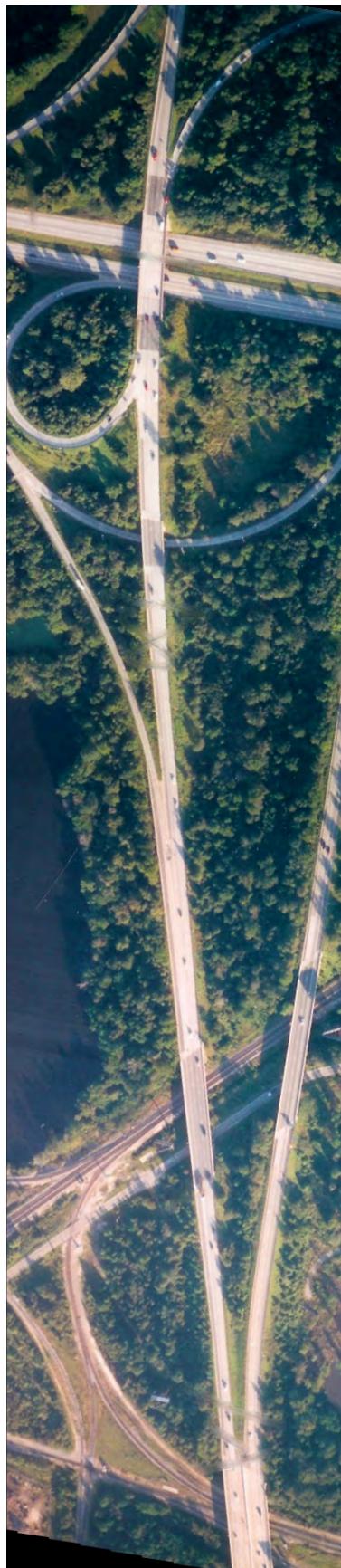
Above: I-16 at I-95

## **SAVANNAH FREEWAY DEGRADATION: Westbound I-16 in Chatham County, Evening**

During the 2002 evening survey, westbound travelers typically maintained free flow speeds on I-16 in Chatham County. When surveyed again in 2010, westbound congestion was found between I-516 and Chatham Parkway. Factors that may have contributed to the congestion included: 1) traffic entering at the ramps at I-516 and Chatham Pkwy; 2) sunglare.



**2002**



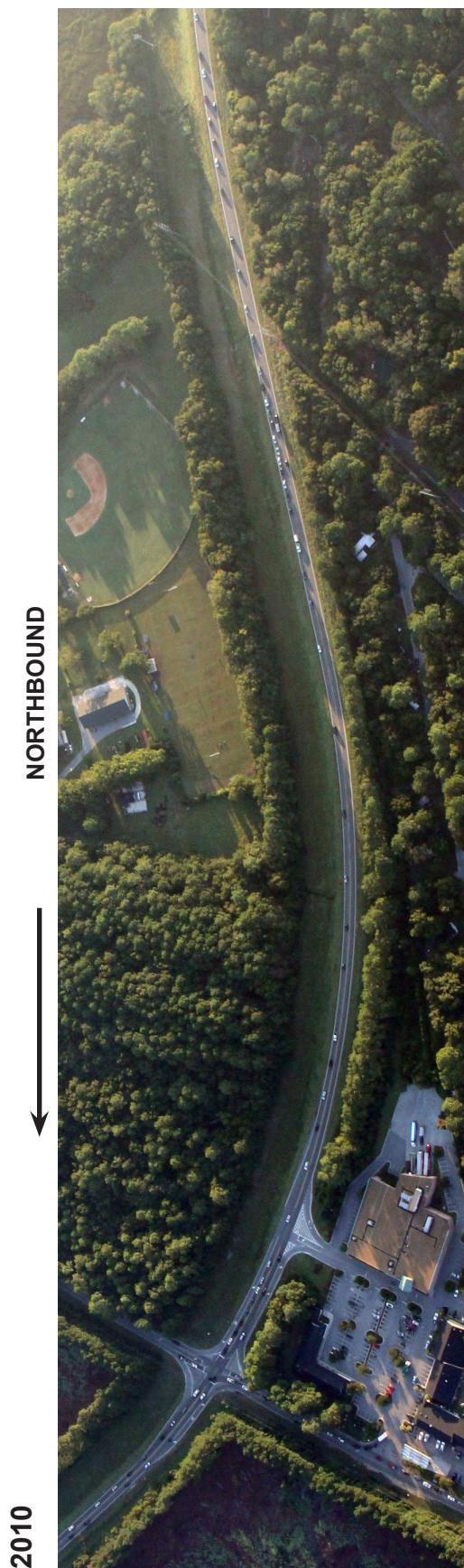
**2010**



*Above: I-16 at I-516*

## **SAVANNAH ARTERIAL DEGRADATION: SR 204 Spur at Ferguson Ave in Chatham County, Morning**

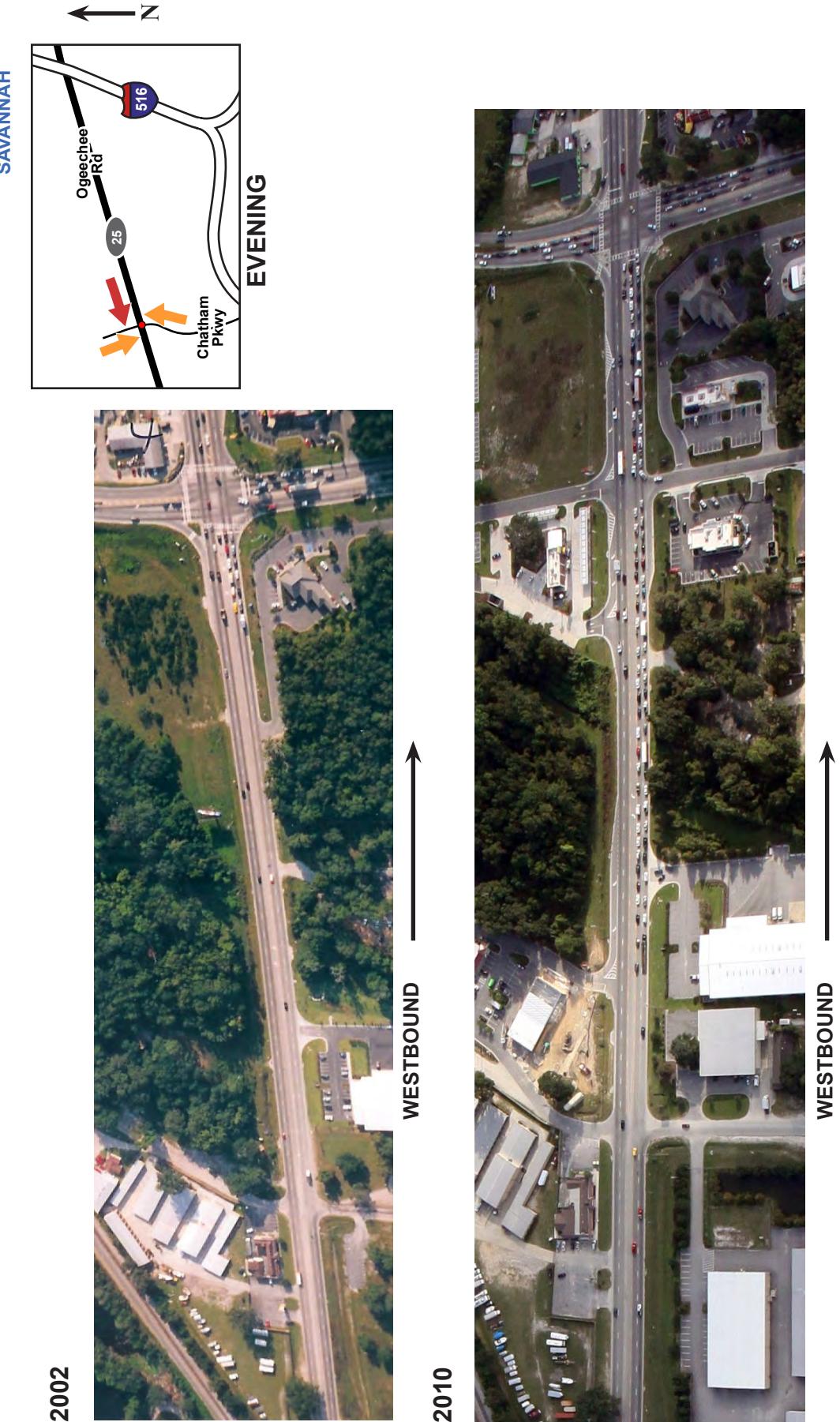
New northbound congestion was found on SR 204 Spur approaching the signal at Ferguson Ave, during the peak period, congestion extended back to the vicinity of the Diamond Causeway (a distance of approximately one mile). During some observations, downstream congestion appeared to inhibit throughput at the signal. While similar congestion was found downstream of Ferguson Ave in 2002, significant congestion did not develop at Ferguson Ave. During the 2010 survey, northbound congestion was also found on Ferguson Ave; the head of this queue was found in the dedicated left-turn lane.



SR 204 Spur at Ferguson Ave

## **SAVANNAH ARTERIAL DEGRADATION: SR 25/US 17 westbound at Chatham Parkway in Chatham County, Evening**

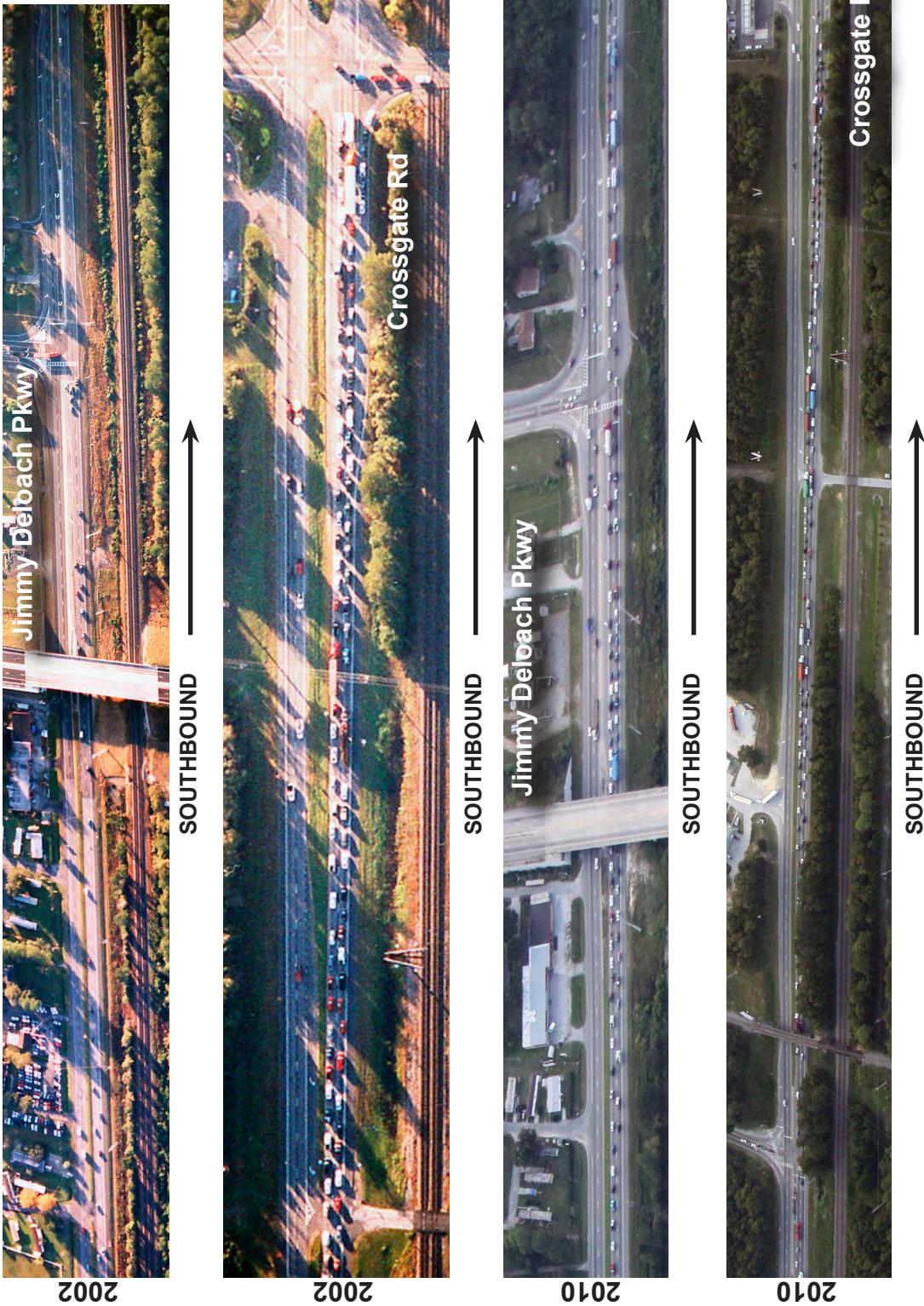
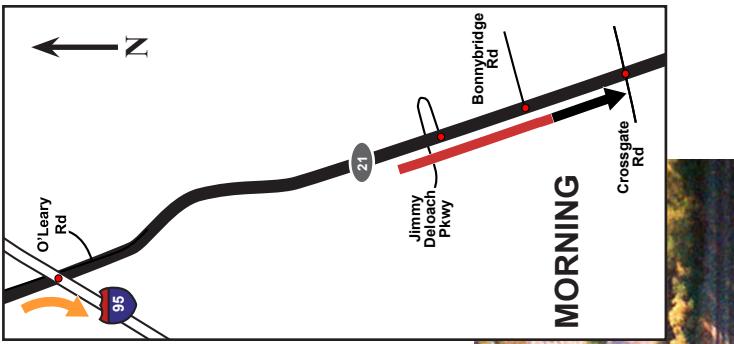
During the peak hour, new westbound congestion was found on SR 25 approaching the signal at Chatham Pkwy; additionally, intermittent congestion was found on both approaches on Chatham Pkwy. The parallel corridor two miles to the north (I-16) also experienced new westbound congestion during the peak hour.



## SAVANNAH

### SAVANNAH ARTERIAL DEGRADATION: SR 21 at Crossgate Rd in Chatham County, Morning

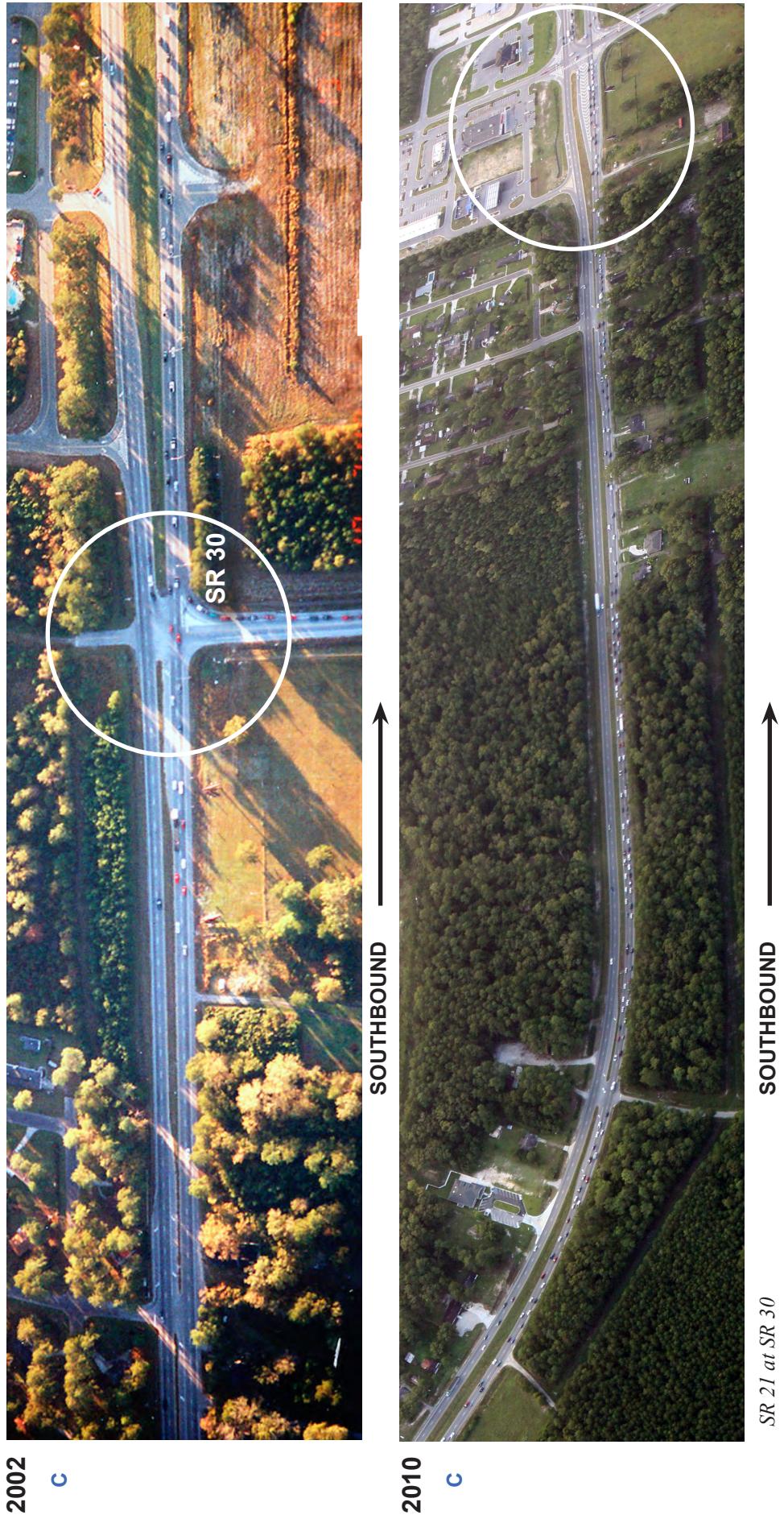
Southbound congestion on SR 21 at Crossgate Rd was not entirely new as congestion was found here during the 2002 survey (albeit queuing not as severe); during the peak period in 2010, congestion typically extended over one mile upstream (to the vicinity of Jimmy Deloach Pkwy).



### SAVANNAH ARTERIAL DEGRADATION: SR 21 at SR 30 in Chatham County

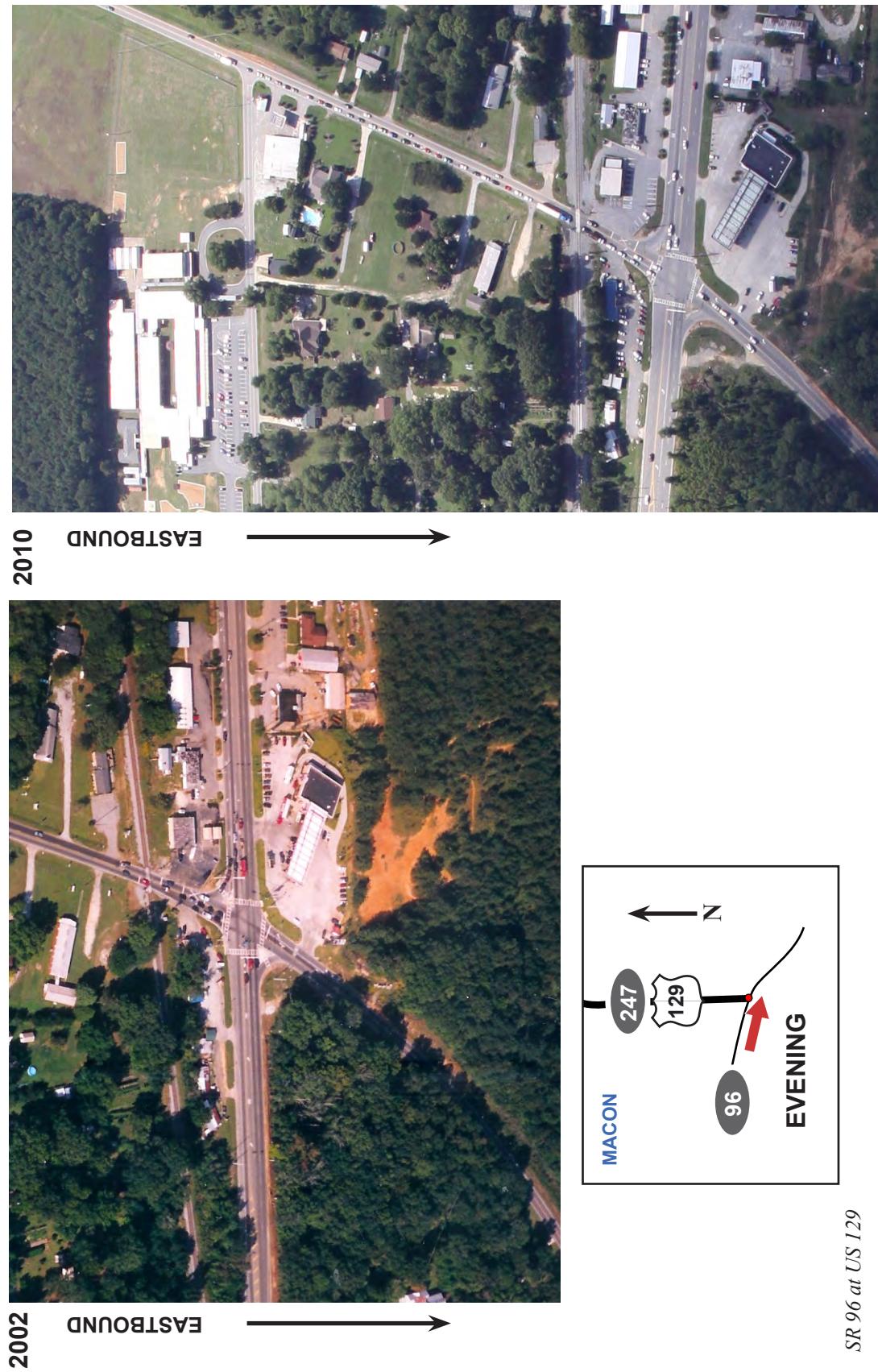
During the morning surveys in 2002, large platoons were found traveling southbound on SR 21 in Chatham County approaching the I-95 interchange (delays in general did not appear significant); during the morning peak period in 2010, severe southbound congestion was typically found approaching the signal at SR 30. It is likely that increased demand on this corridor (since 2002) contributed to degraded conditions.

South of SR 30, thru-travelers encountered intermittent congestion approaching the signals at I-95 (2002 findings); widening of the roadway here (two to three lanes) likely contributed to the absence of congestion documented in 2010.



## **MACON ARTERIAL DEGRADATION: SR 96 eastbound at US 129 in Houston County, Evening**

New congestion was found on eastbound SR 96 in the evening approaching the signal at SR 247/US 129; when congested, queue populations ranged from 20 to 50 vehicles (one lane). During one observation, the head of the queue was found at the railroad crossing located just west of the signal.



*SR 96 at US 129*



## **PART TWO / COMPARISON:**

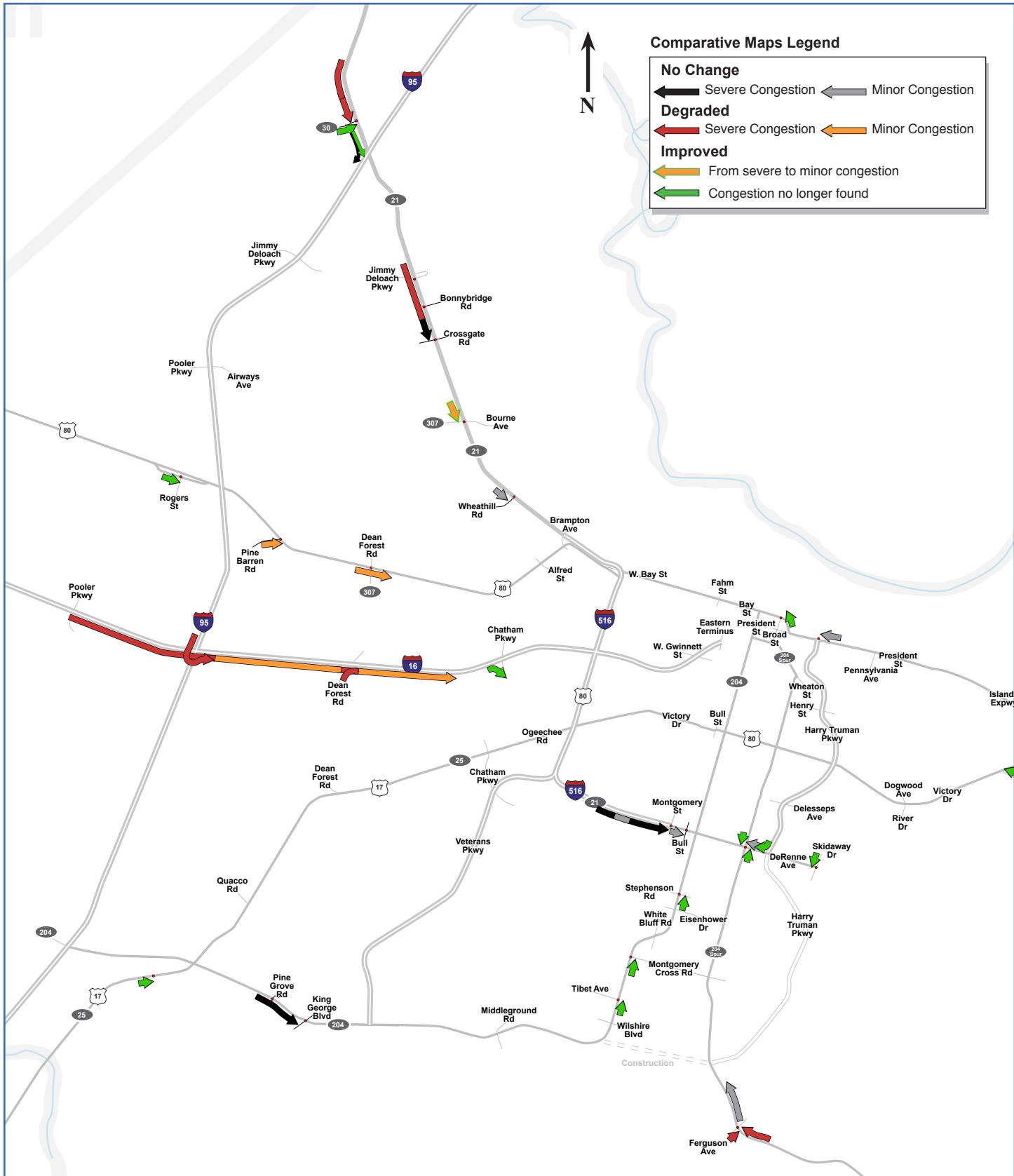
### **Section 2.3: Comparative Maps**

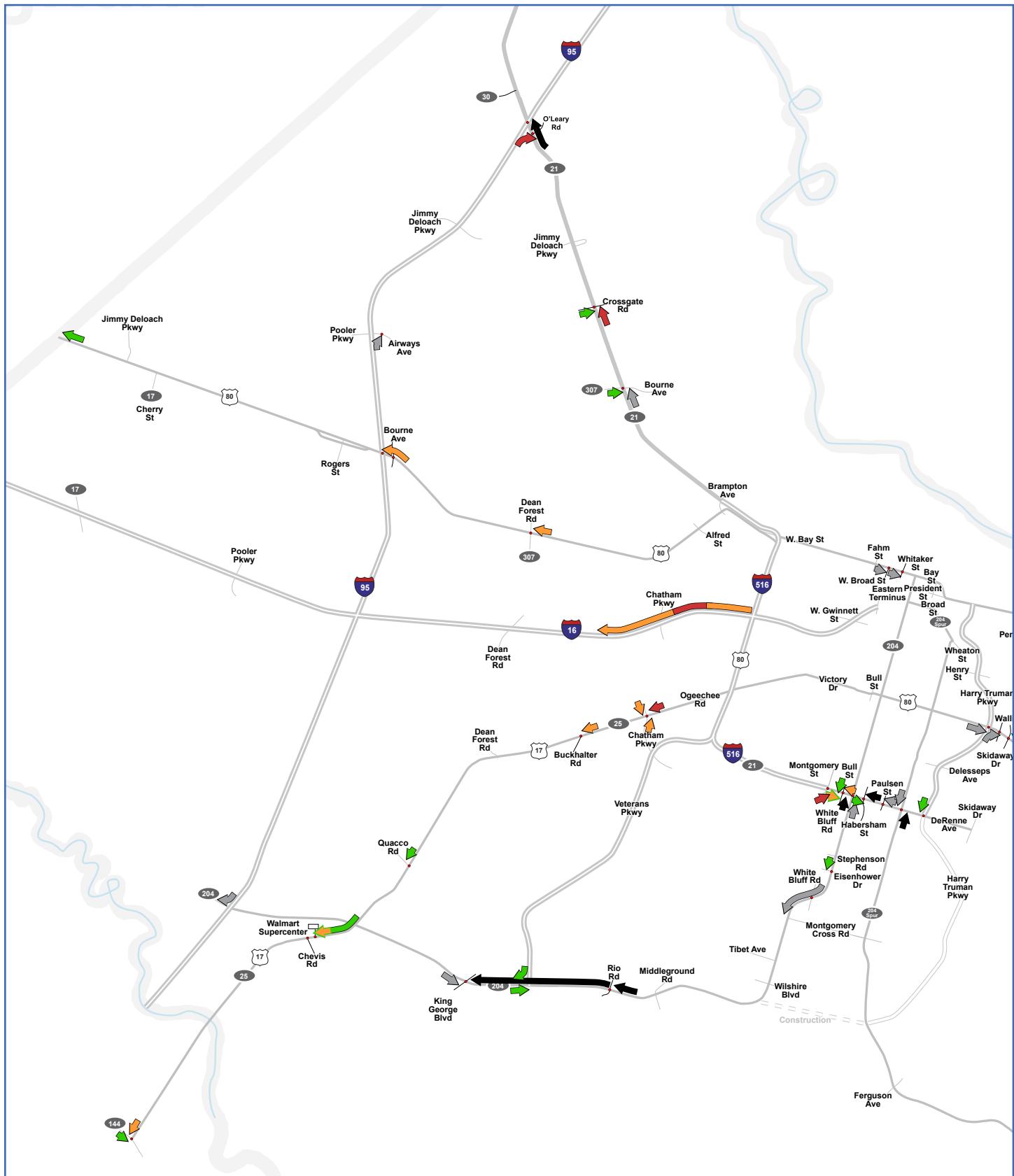
### **2010 vs 2002**

This section of the report consists of a set of comparative maps (region-wide), which are modified versions of the bottleneck maps found in Part One; these maps introduce the use of different colored arrows to depict locations where significant mobility changes were documented, and locations where similar congestion was found during each of the surveyed years. The legend below contains each of the arrows used on these maps and the definition of each.

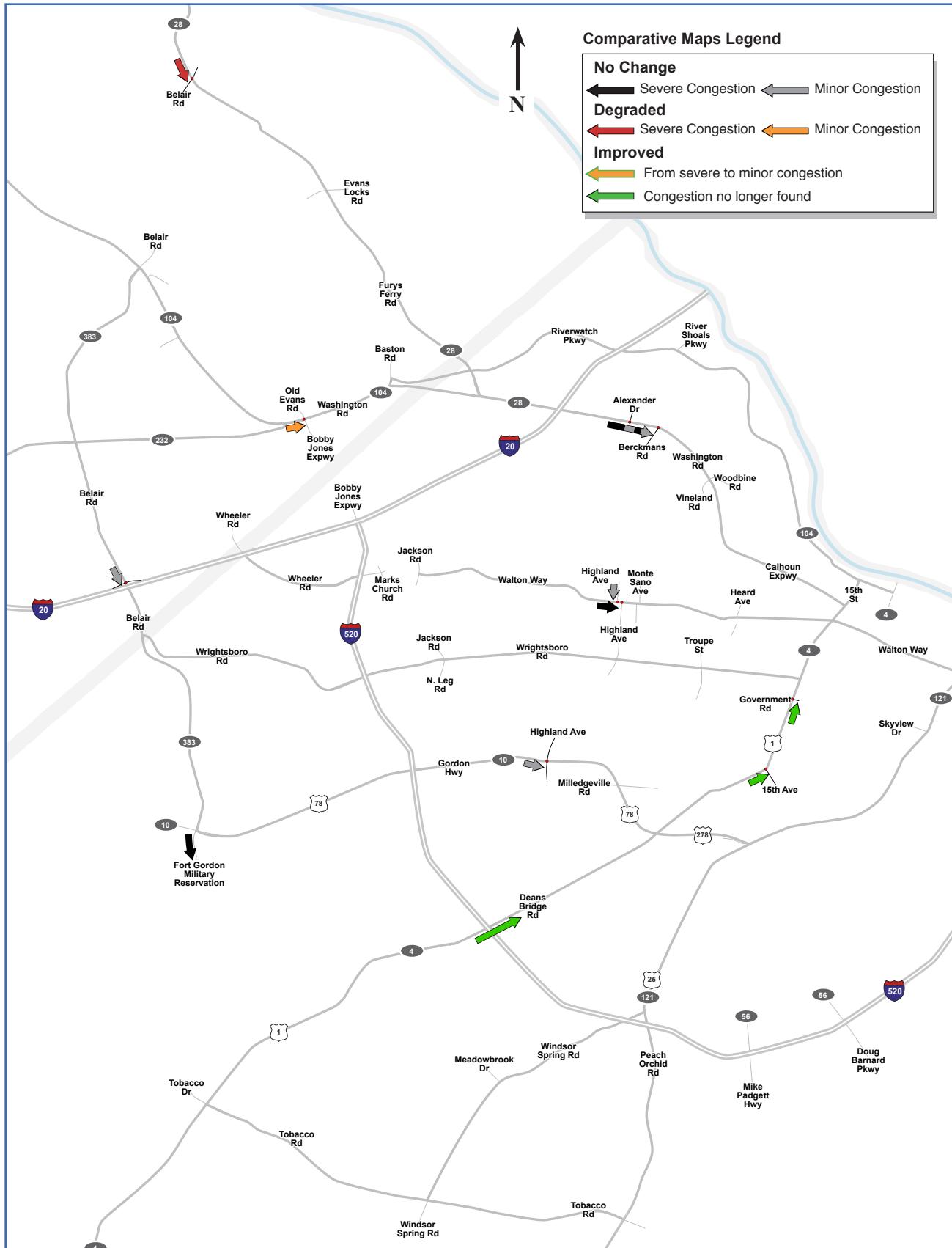
Comparative Traffic Conditions:	Legend for Comparative Graphics
IMPROVED:	Marginally congested in 2010, congested in 2002 Not congested in 2010, congested in 2002
DEGRADED:	Congested in 2010, not congested in 2002 Marginally congested in 2010, not congested in 2002
NO CHANGE:	Congested in 2010 and 2002 Marginally congested in 2010 and 2002

# SAVANNAH COMPARATIVE MAP (morning)

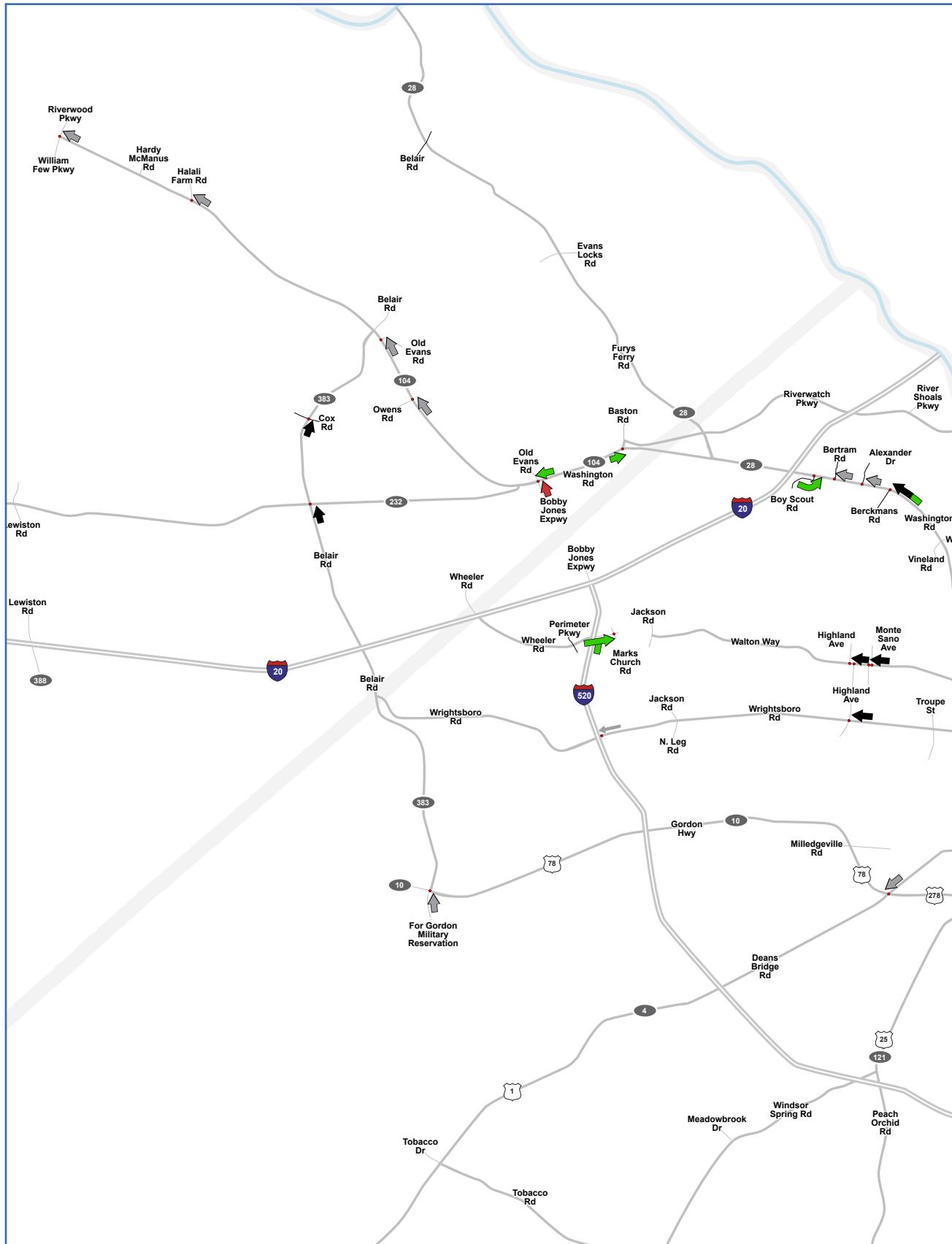




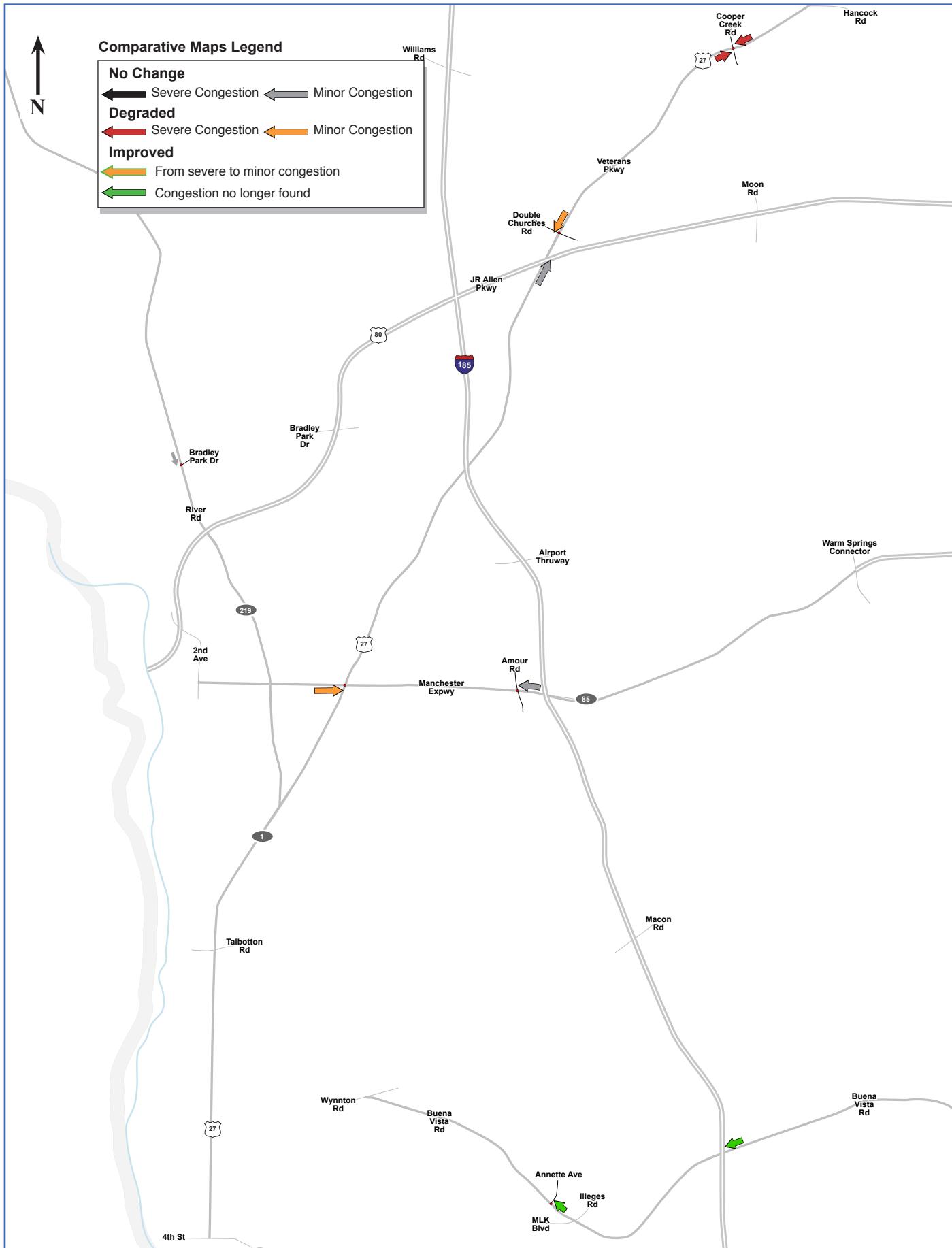
# AUGUSTA COMPARATIVE MAP (morning)



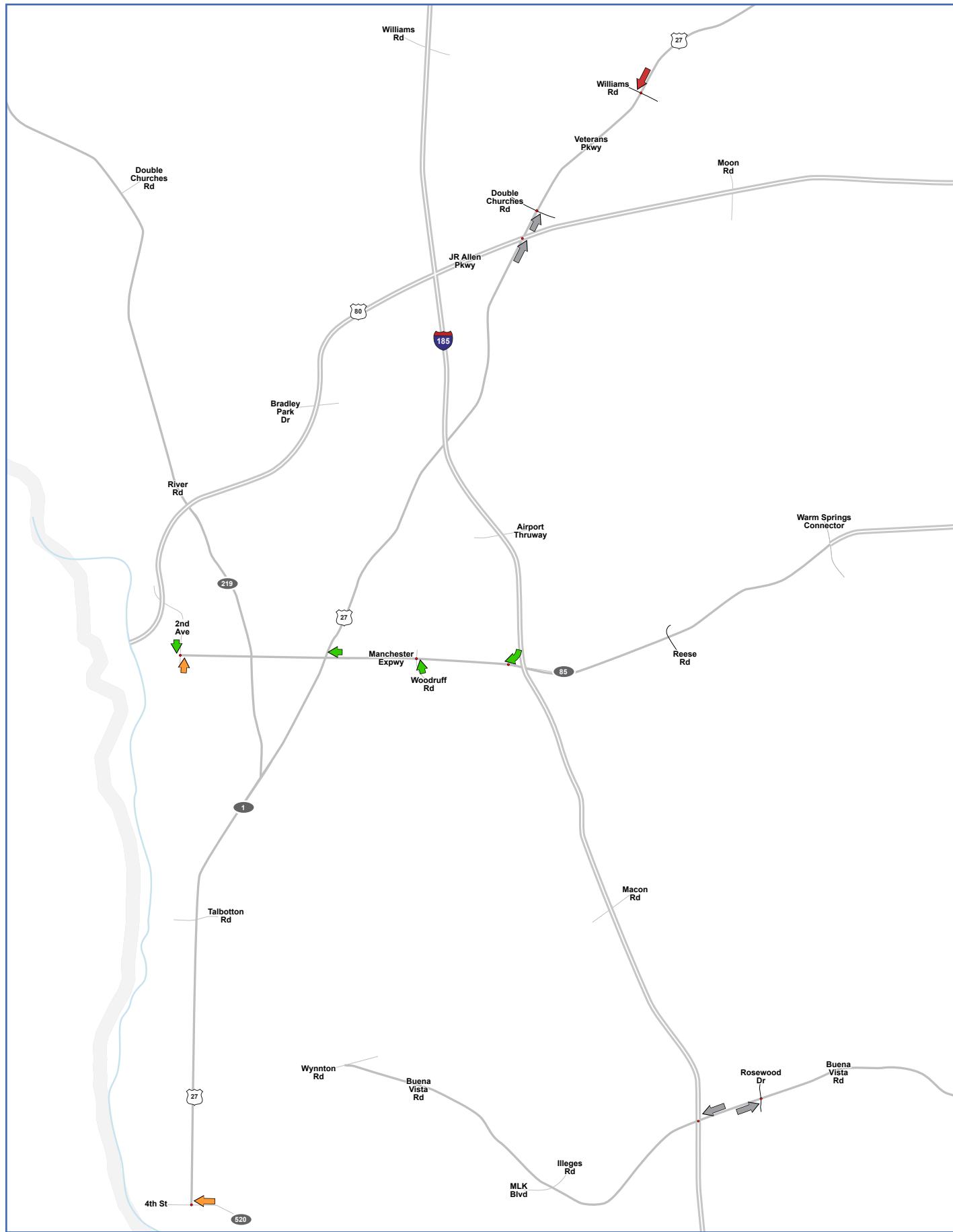
## AUGUSTA COMPARATIVE MAP (evening)



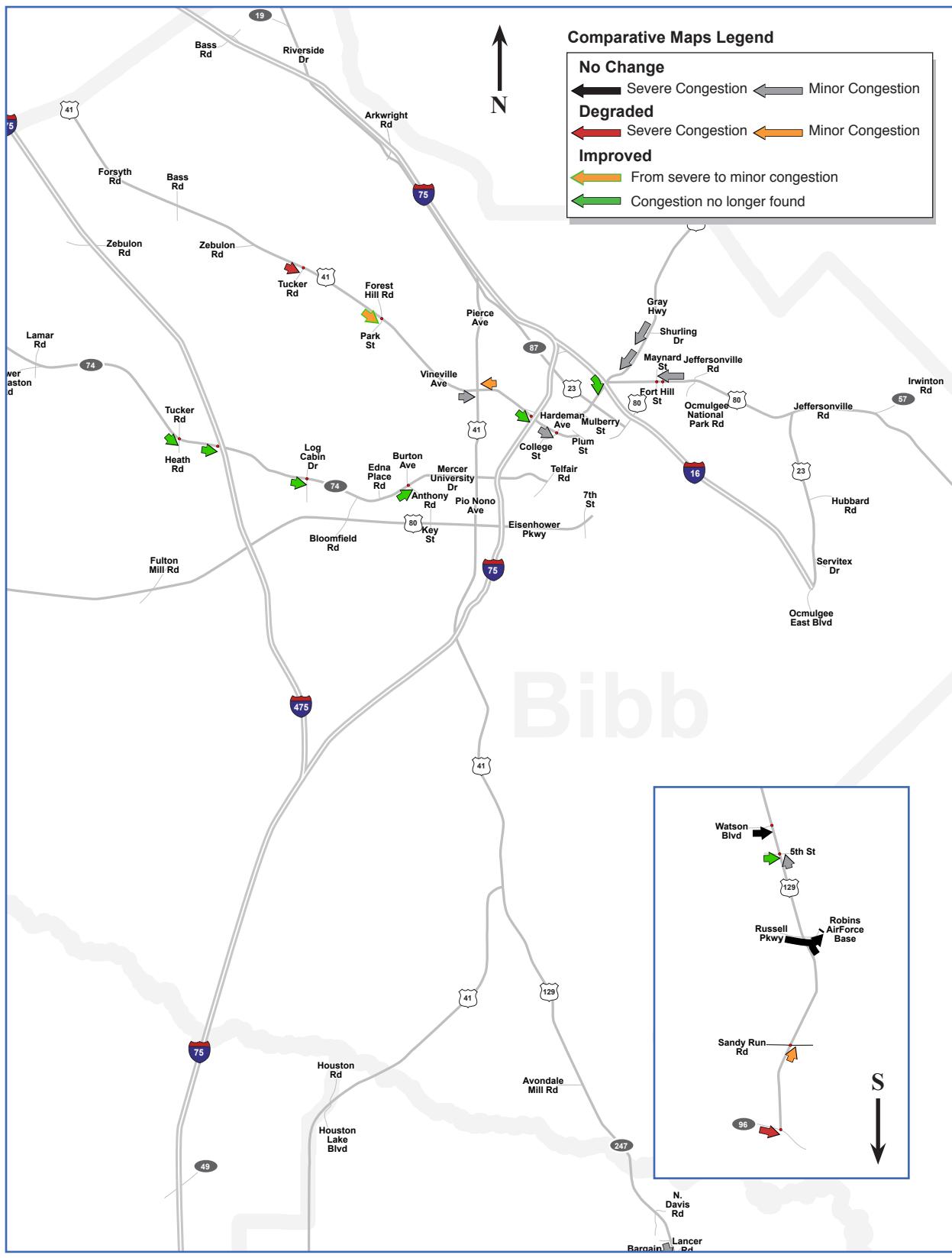
# COLUMBUS COMPARATIVE MAP (morning)



## COLUMBUS COMPARATIVE MAP (evening)

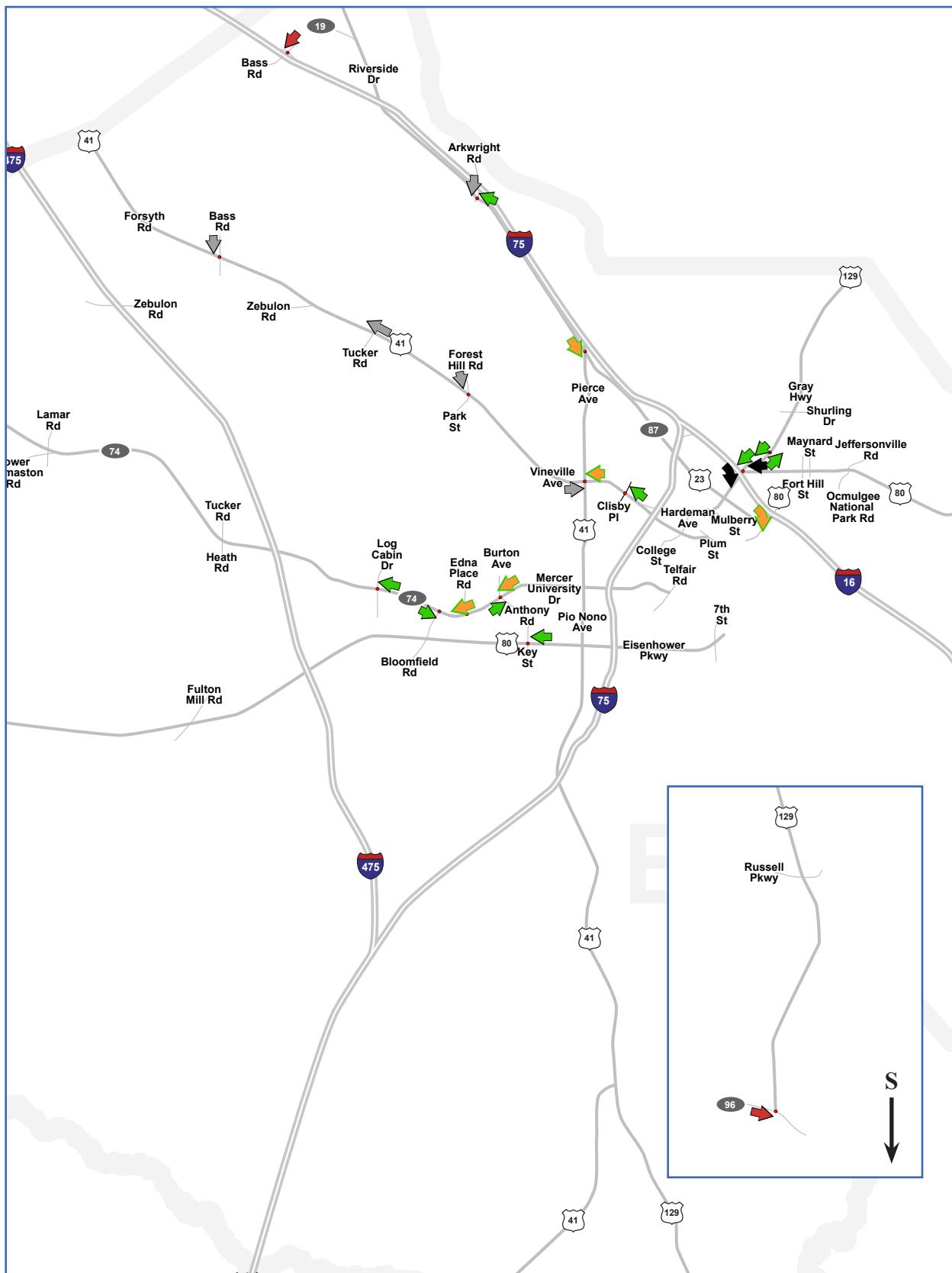


# MACON-WARNER ROBINS COMPARATIVE MAP (morning)



(see inset)

## MACON-WARNER ROBINS COMPARATIVE MAP (evening)



(see inset)